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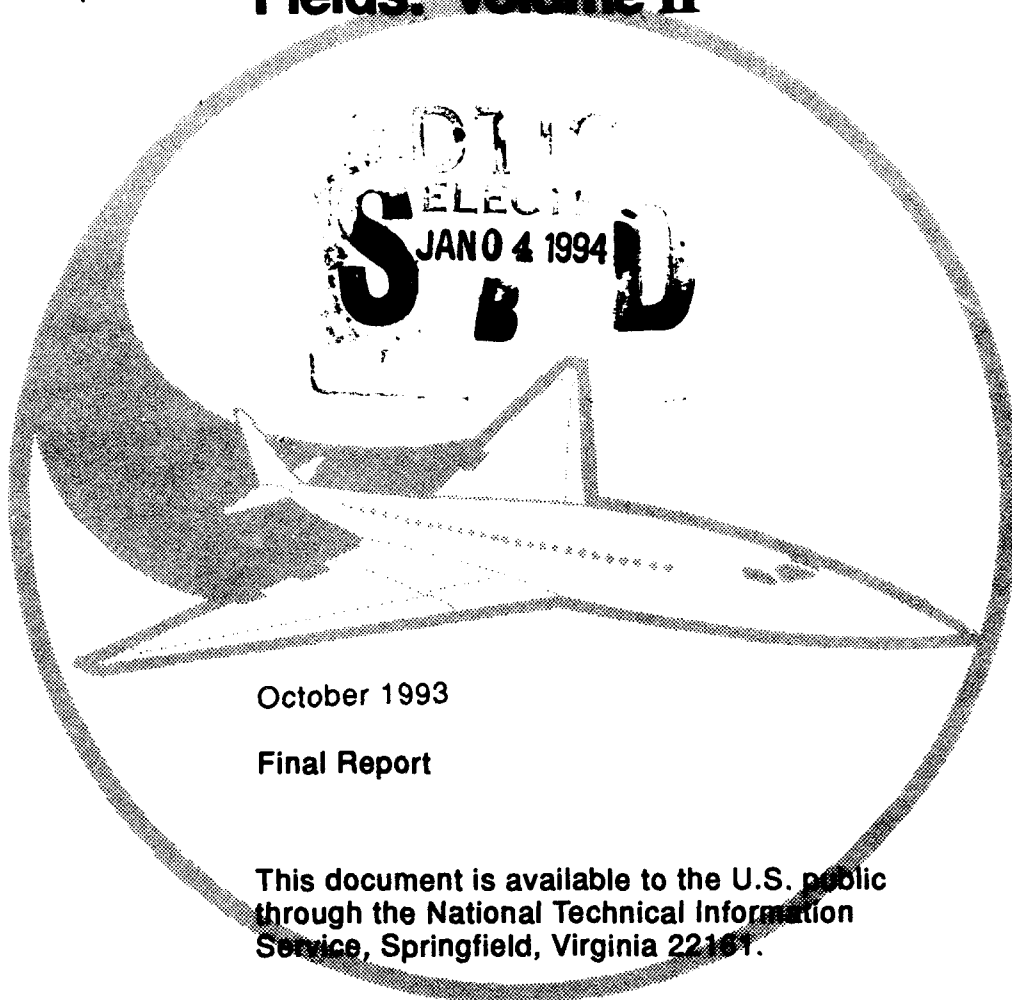


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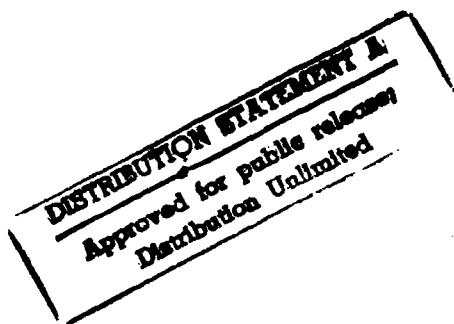
S-76 High Intensity Radiated Fields: Volume II



October 1993

Final Report

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Technical Report Documentation Page

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15. Supplementary Notes FAA Project Manager: Michael Glynn * Volume II of III					
16. Abstract The Federal Aviation Administration (FAA) Technical Center sponsored a series of High Intensity Radiated Fields (HIRF) test on a Sikorsky S-76 rotorcraft. The project was conducted to evaluate the practicality of performing aircraft level HIRF tests, determine the effects of HIRF on a specific rotorcraft with the potential to obtain information on rotorcraft in general, and evaluate the effects of exposure to "real world" HIRF emitters. HIRF ground and flight tests were conducted to achieve the objective of the project. Site calibration (SCAL) measurements were made in the test area to determine the levels at which the S-76 would be irradiated when placed in the test area. Ground tests consisted of Low Level Swept Coupling (LLSC) and Low Level Swept Fields (LLSF) tests. The flight tests were flown directly into the main beam of a variety of pulsed and continuous wave (CW) transmitters including the Over the Horizon Back Scatter (OTHB), PAVE PAWS, ASR-9, FPS-65, and FPS-16 radars. Results of the S-76 tests added credibility to the existence of HIRF as a flight safety hazard. In the evaluation of the emitters, the flight tests showed repeatable instances where exposure resulted in instrumentation disruptions. It should however be noted that all the observed disruptions were of a non-critical nature.					
17. Key Words HIRF Electromagnetic Fields LLSC Helicopter			18. Distribution Statement Document is available to the public through the National Technical Information Service, Springfield, Virginia 22161		
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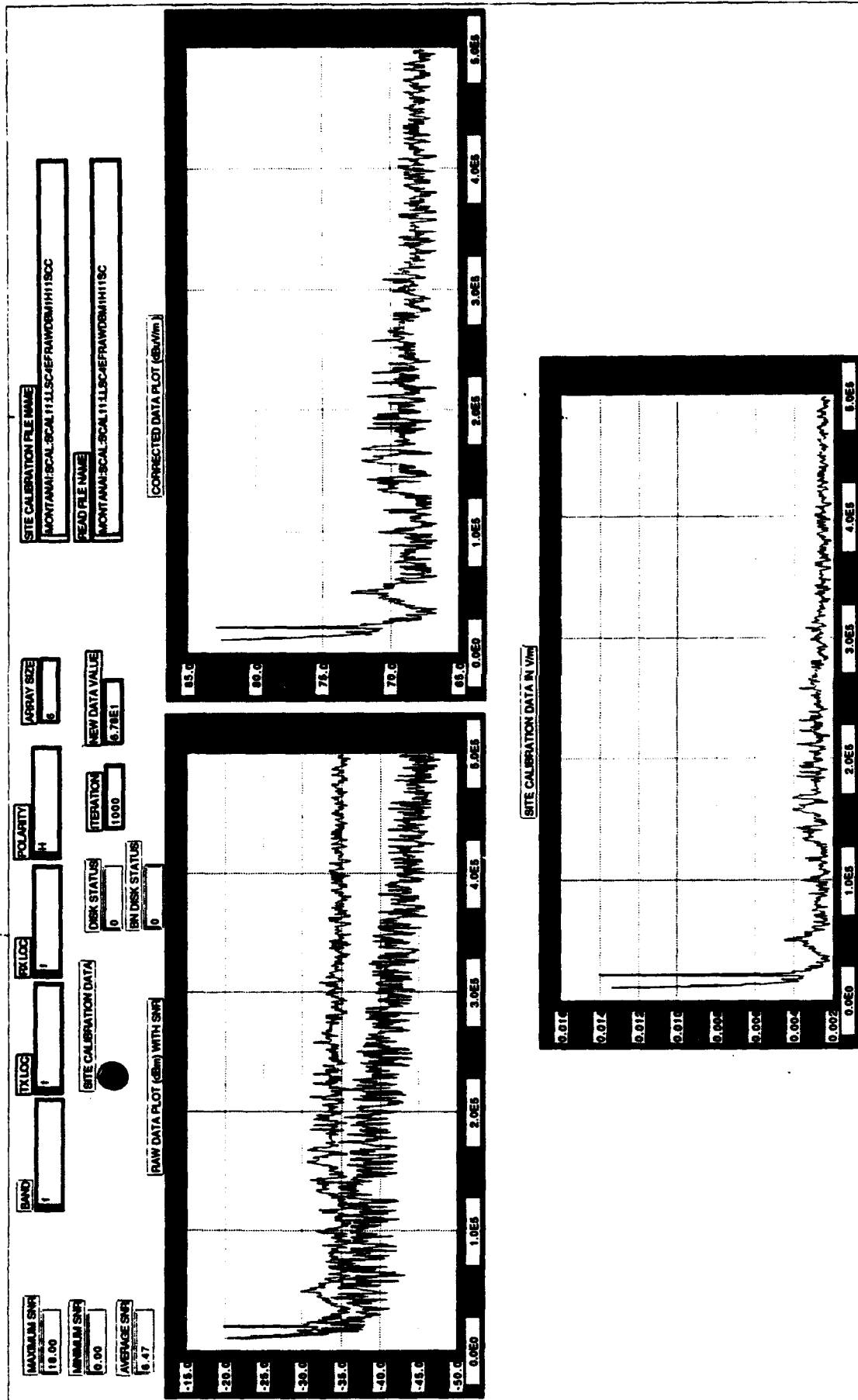
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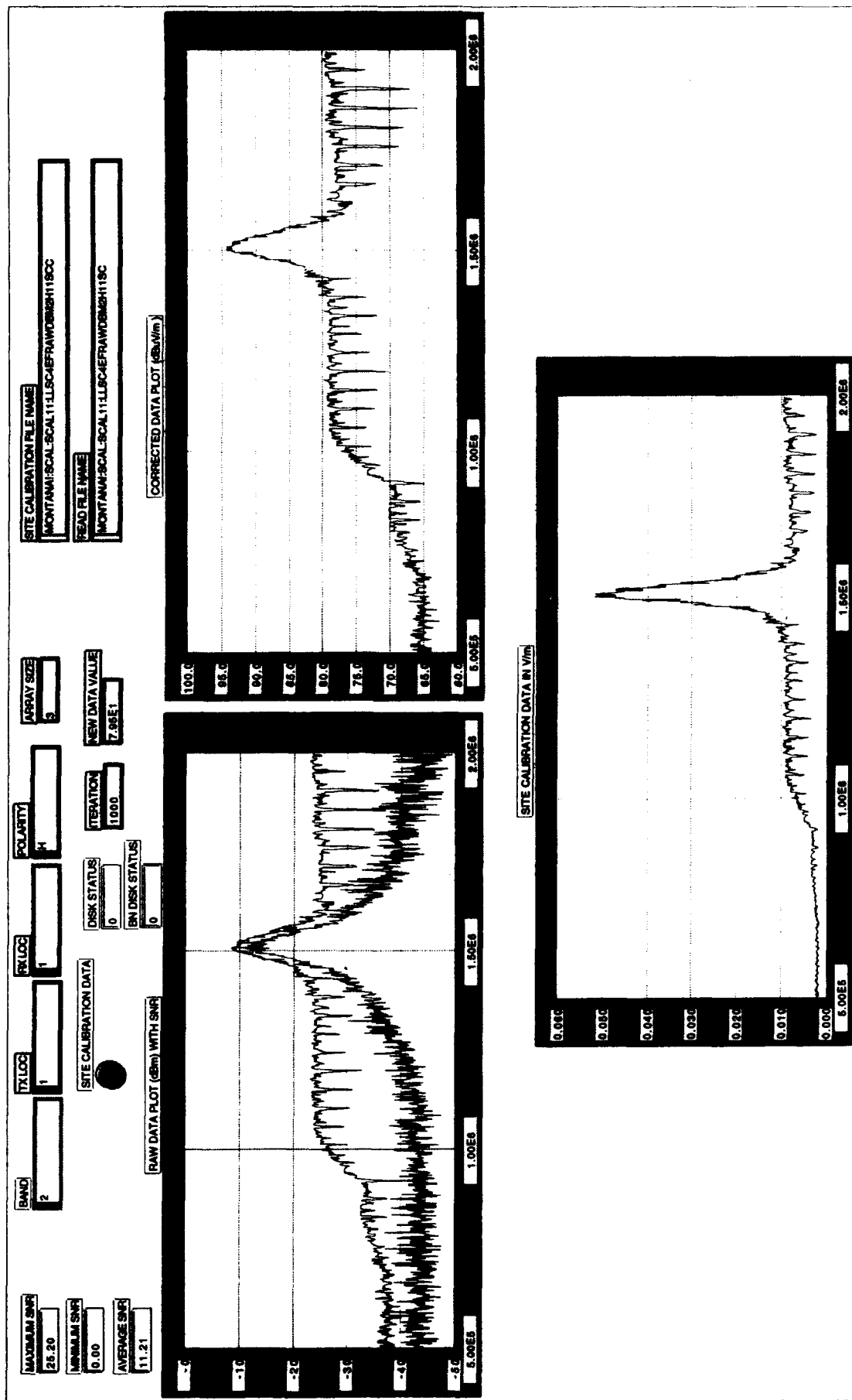
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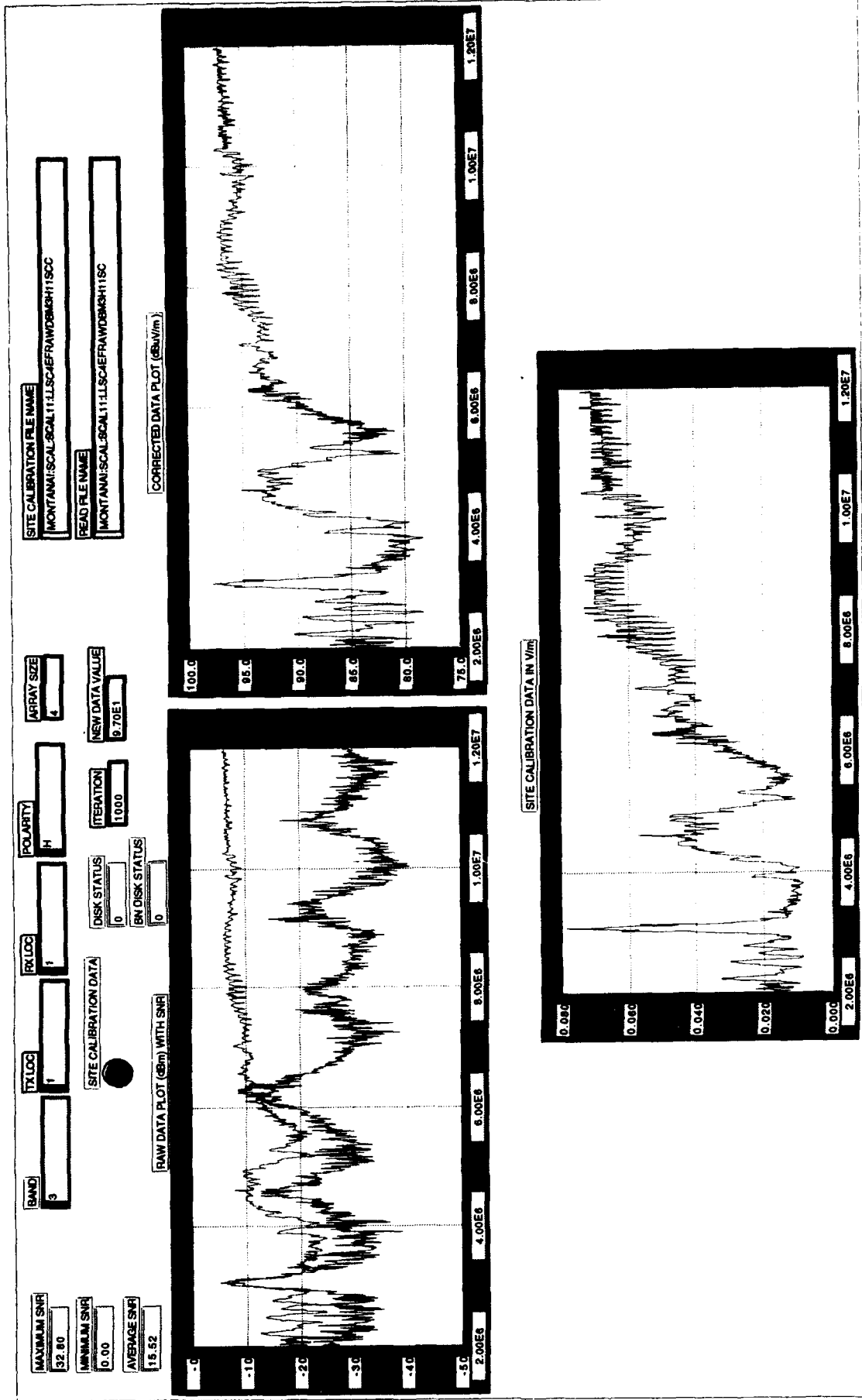
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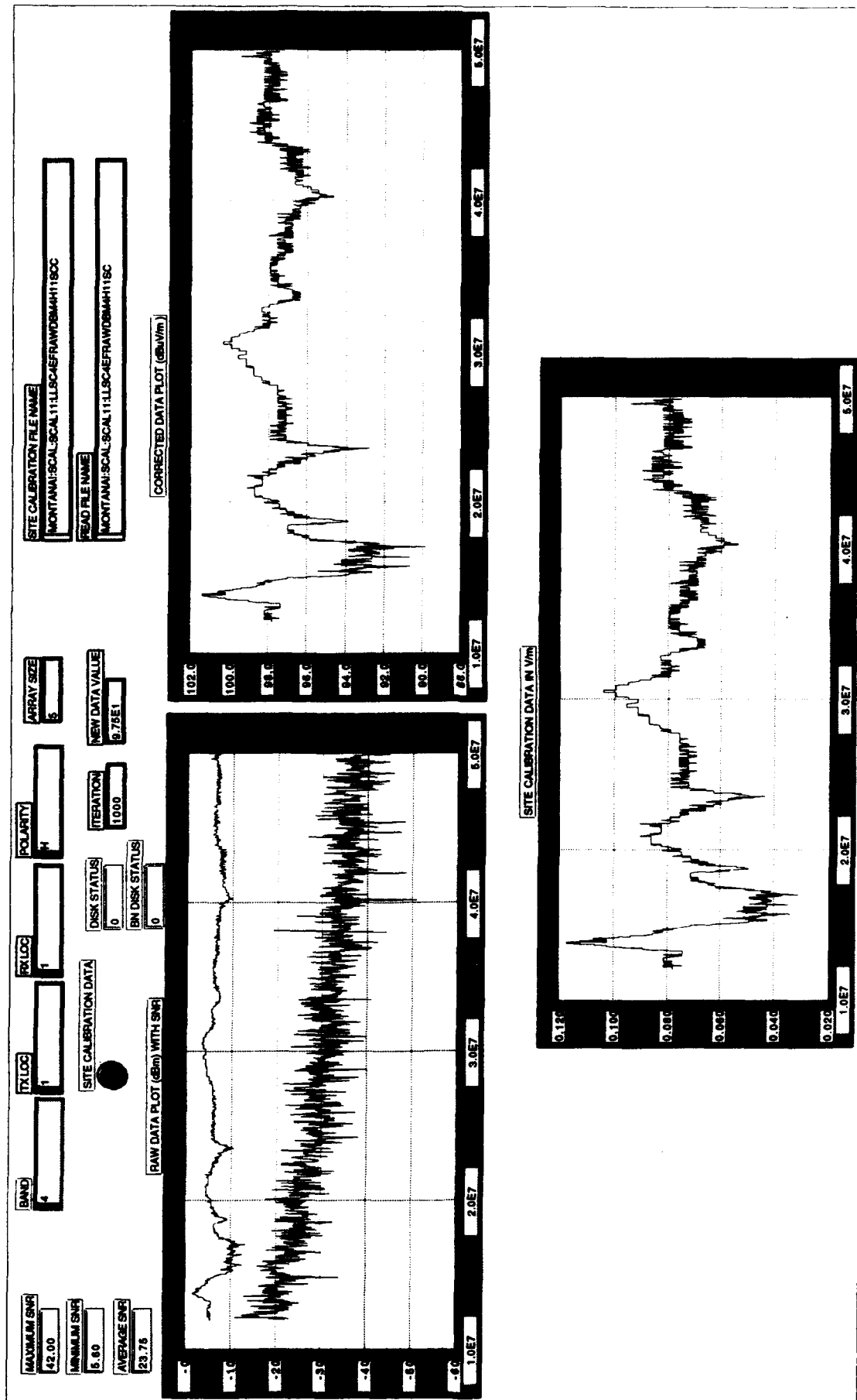
- Band number identification (Band)
 - S-76 orientation during the test (TXLOC)
 - SCAL test set number (RXLOC)
 - Transmit Antennae Polarity (POLARITY)
 - Full threat data array size (ARRAY SIZE - used internally by software application to process the data)
 - Name of the corrected SCAL data file
 - Data type indicator (if black indicates plot is E-Field data)
 - SCAL data type indicator (if black indicated plot is SCAL data)
 - Disk read error indicator (DISK STATUS)
 - Single corrected data value (NEW DATA VALUE - used internally by software application to process data)
 - Original uncorrected SCAL data file name (READ FILE NAME)
 - Original SCAL Data Plot in dBm with background noise overlay (RAW DATA PLOT (dBm) WITH SNR)
 - Corrected data plot in dBuV/m (CORRECTED DATA PLOT dBuV/m OR dBuA)
 - SCAL processed data plot with values in V/m (SITE CALIBRATION DATA IN V/m or A)
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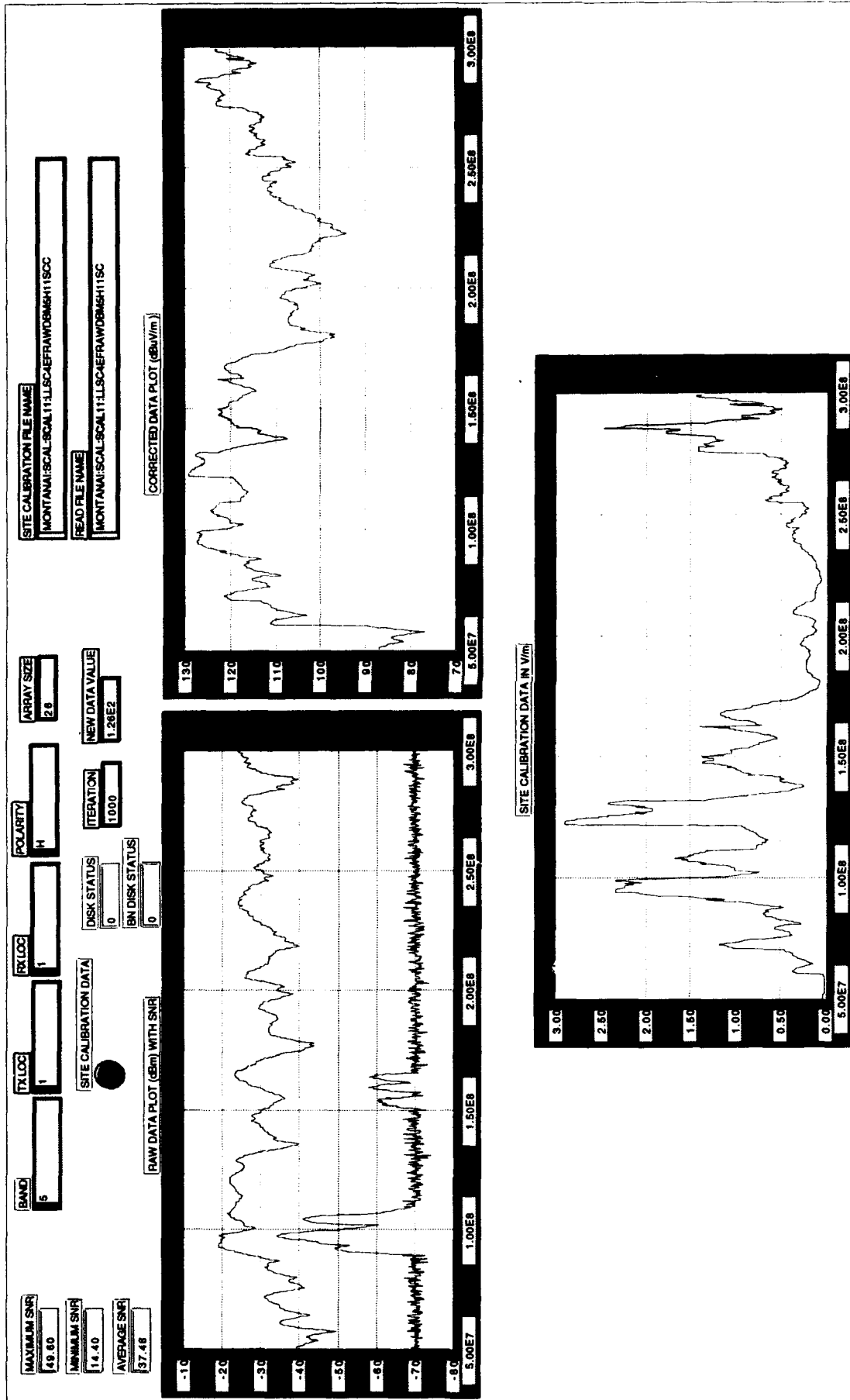
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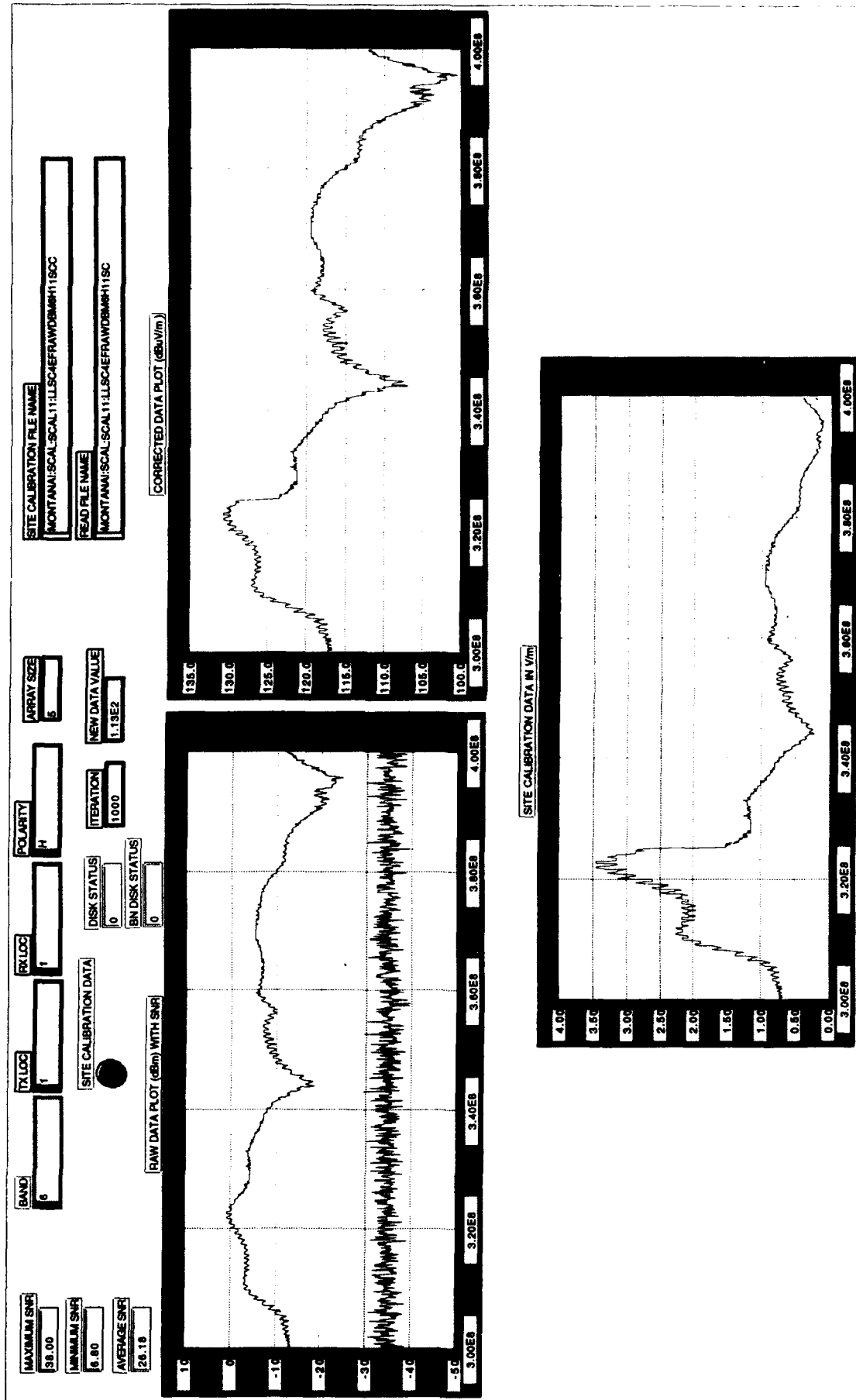


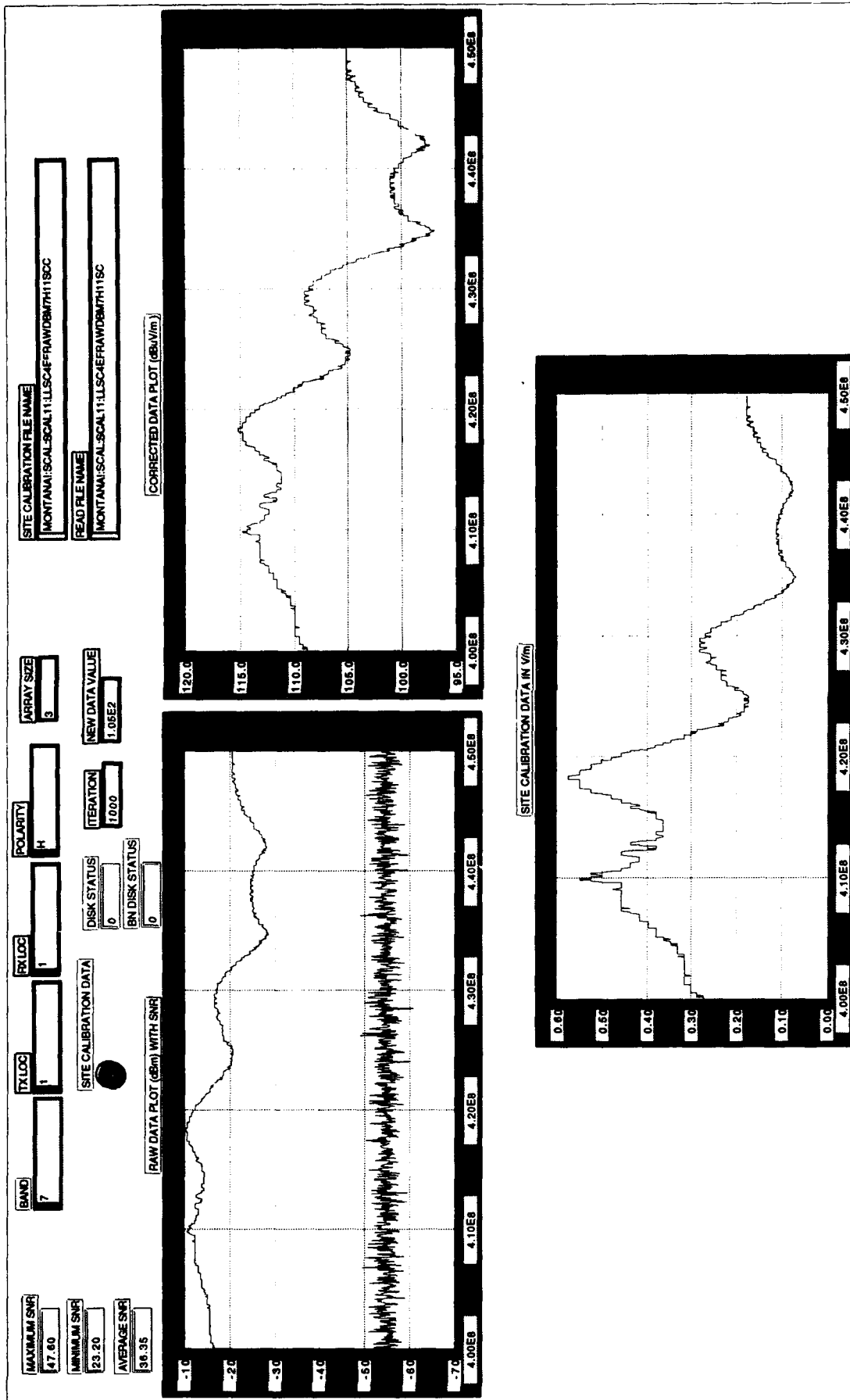


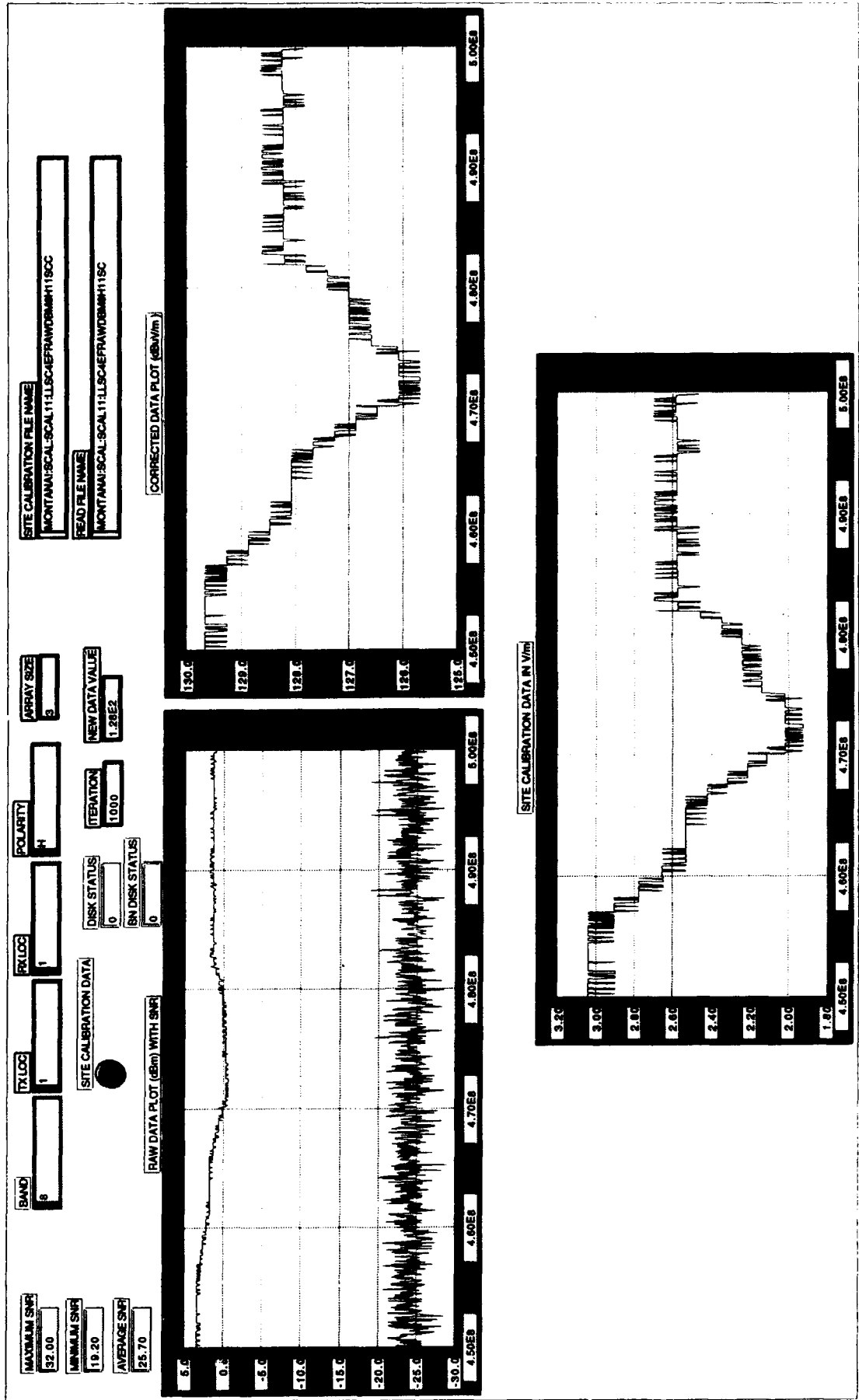


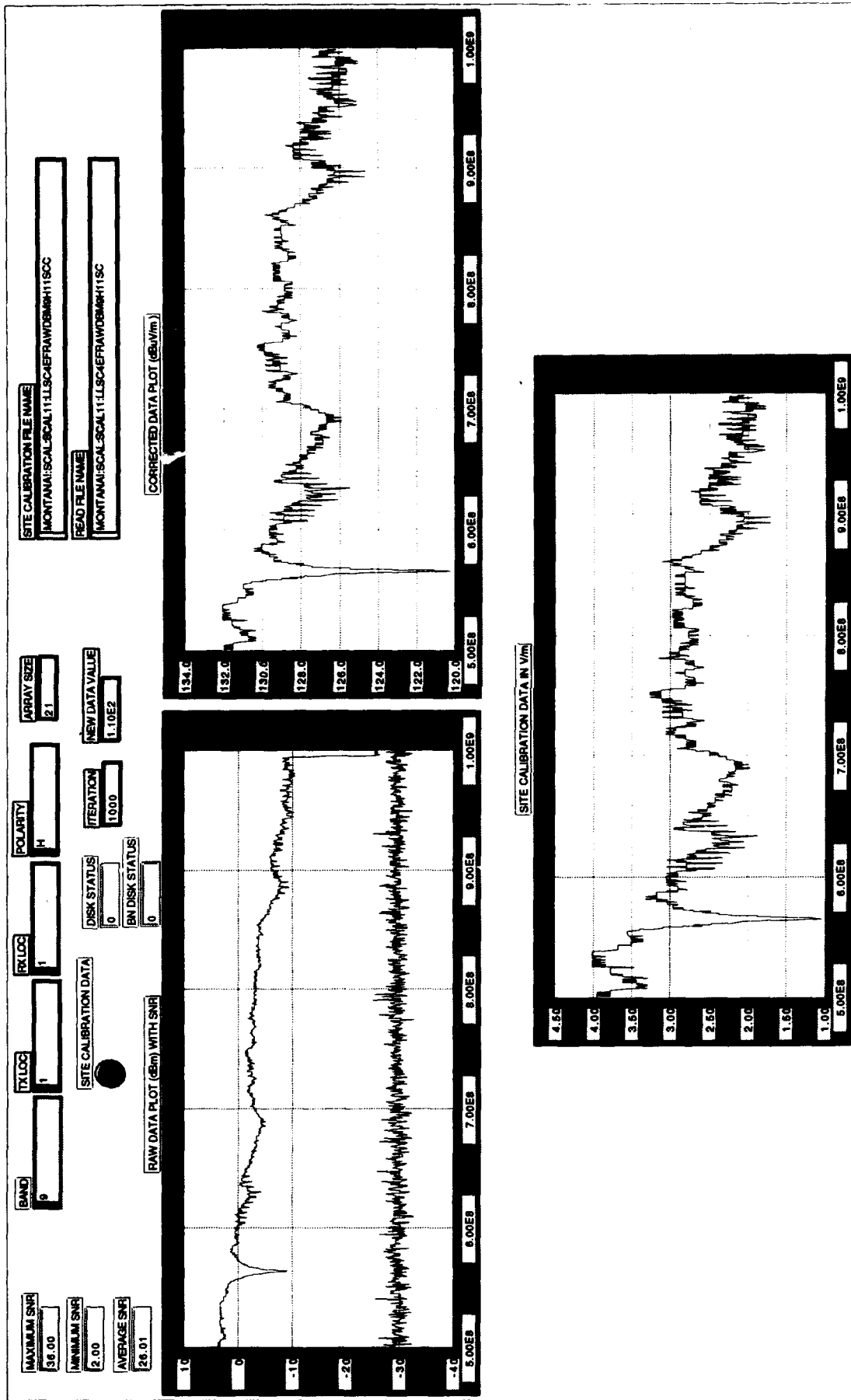


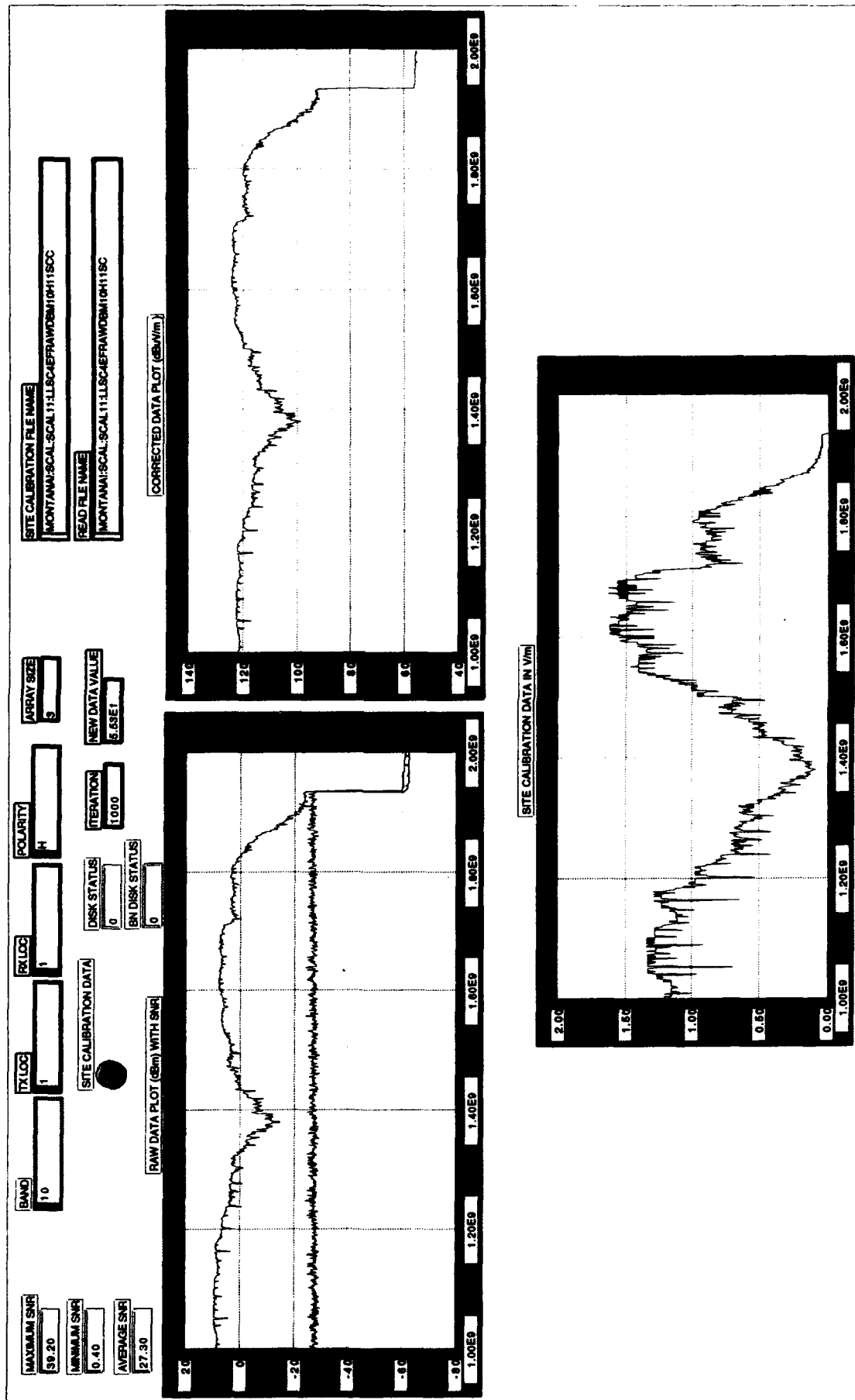


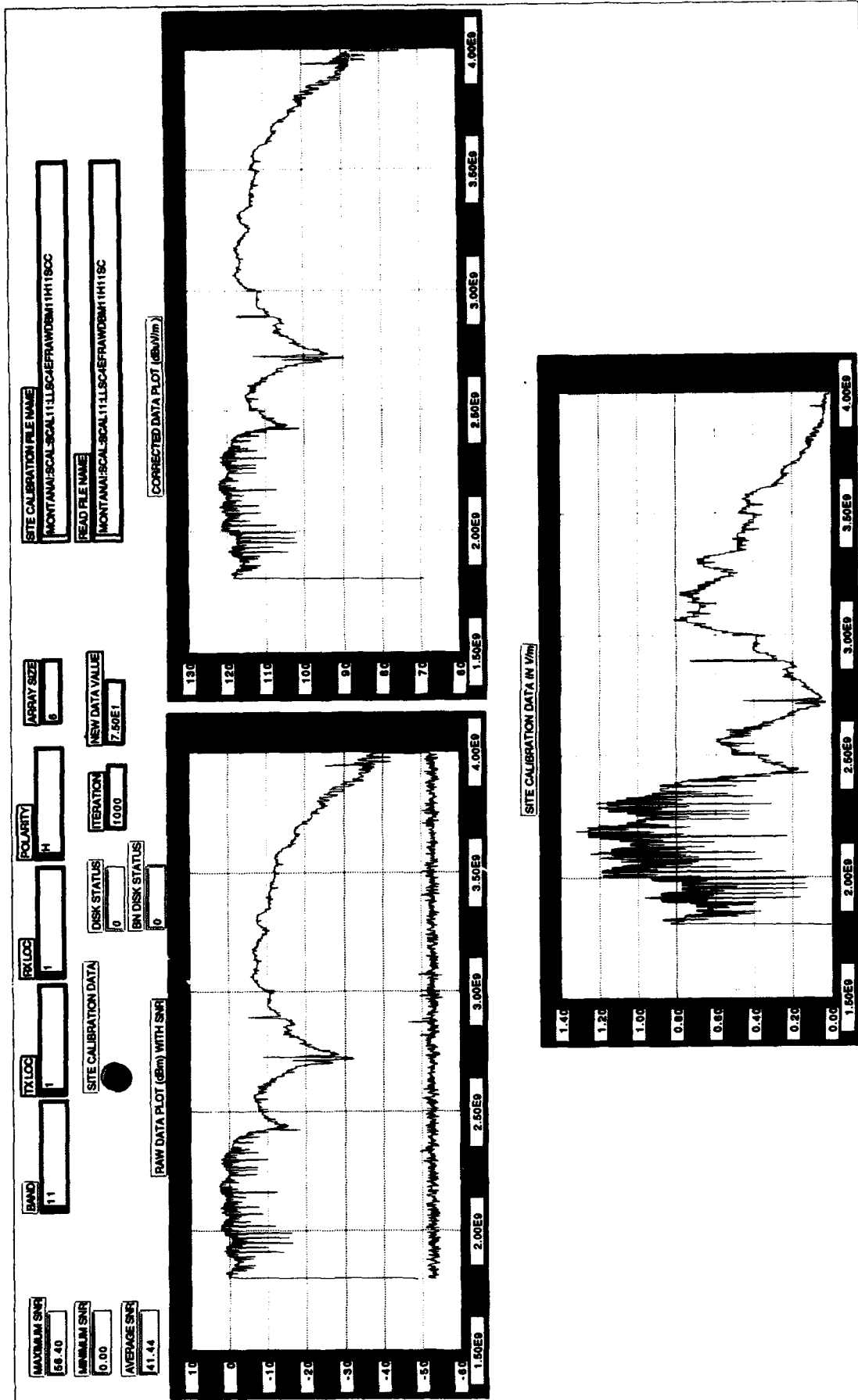


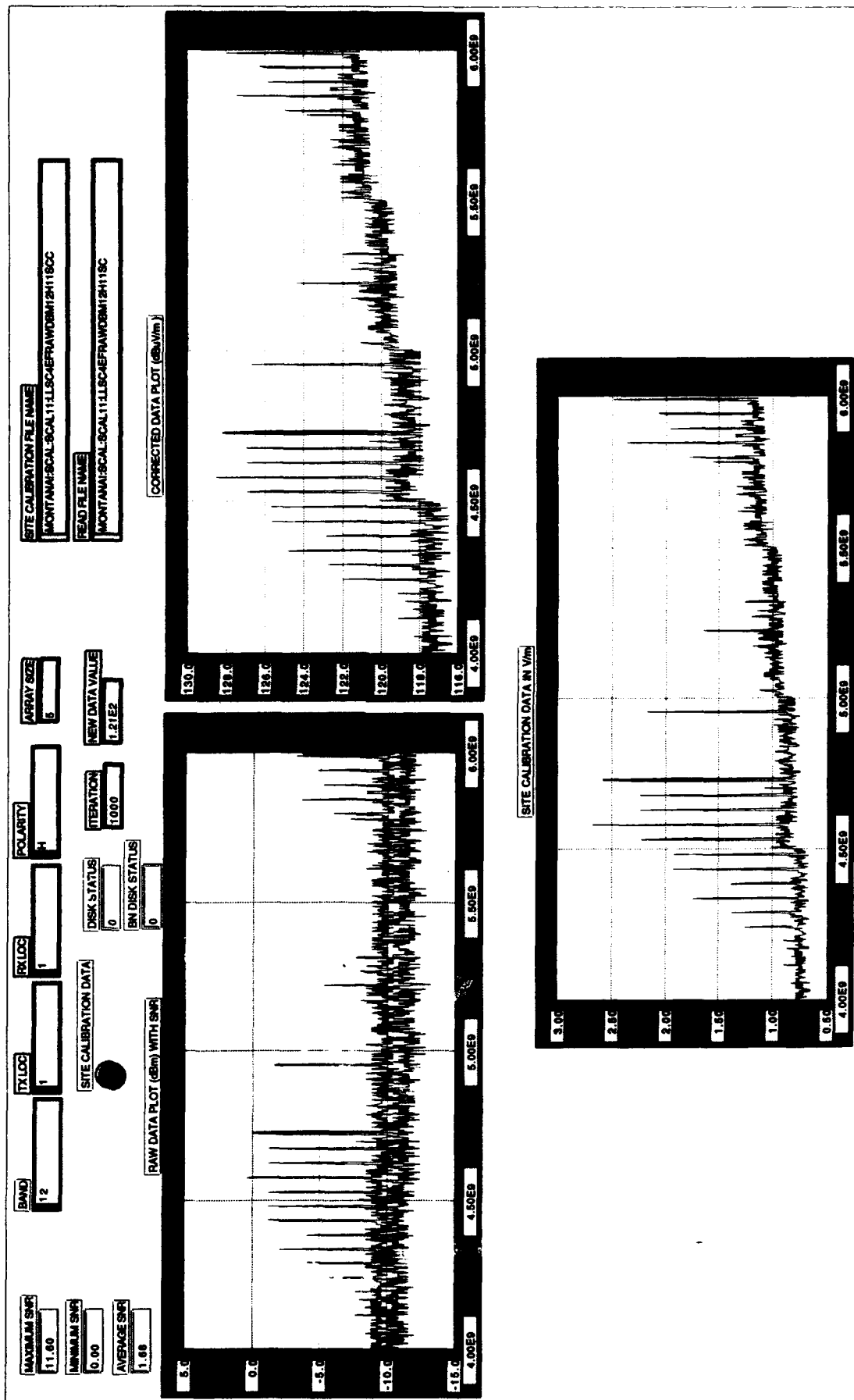


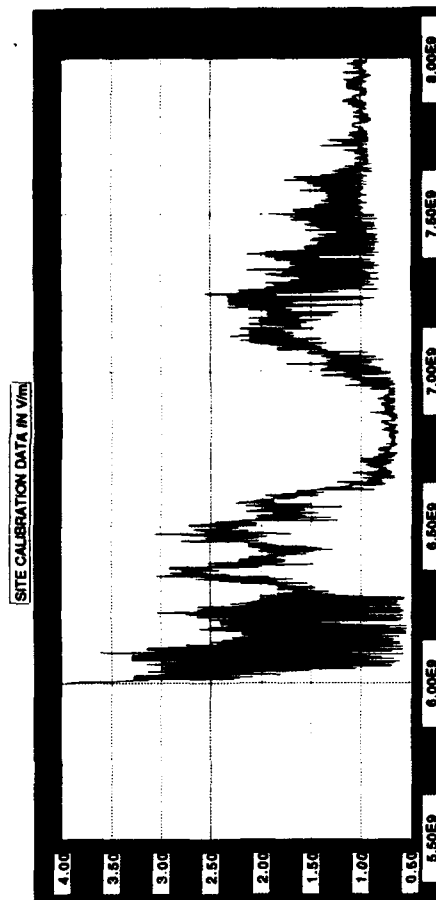
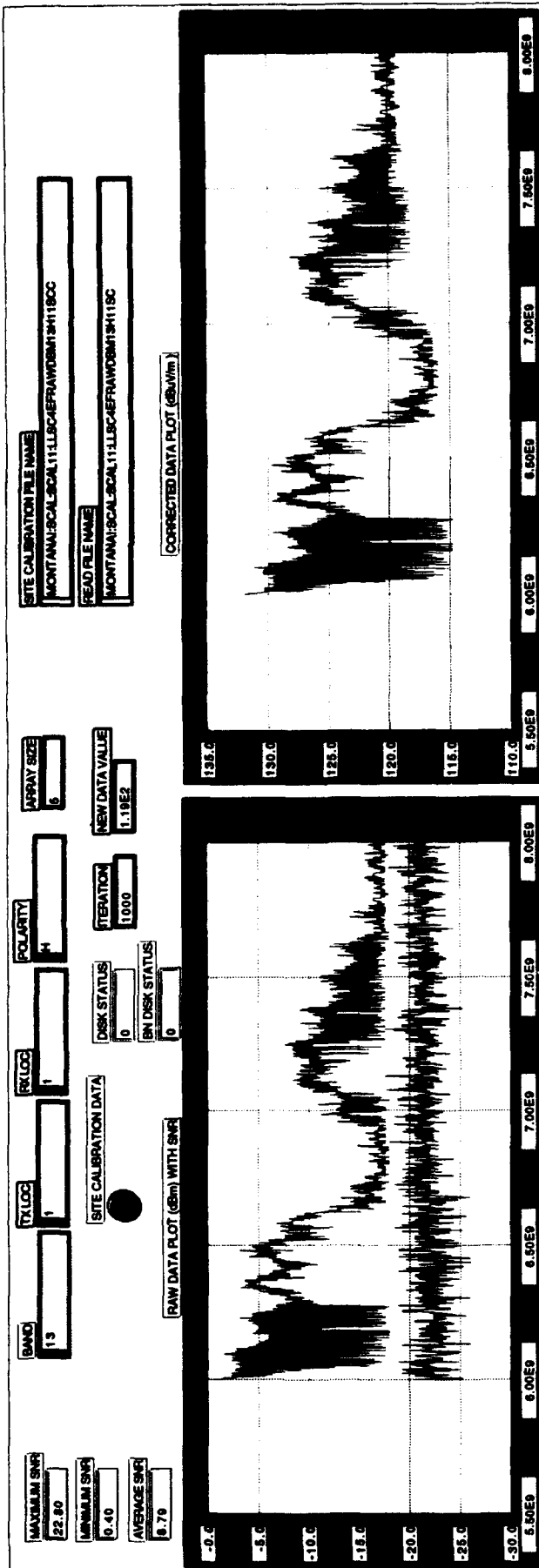


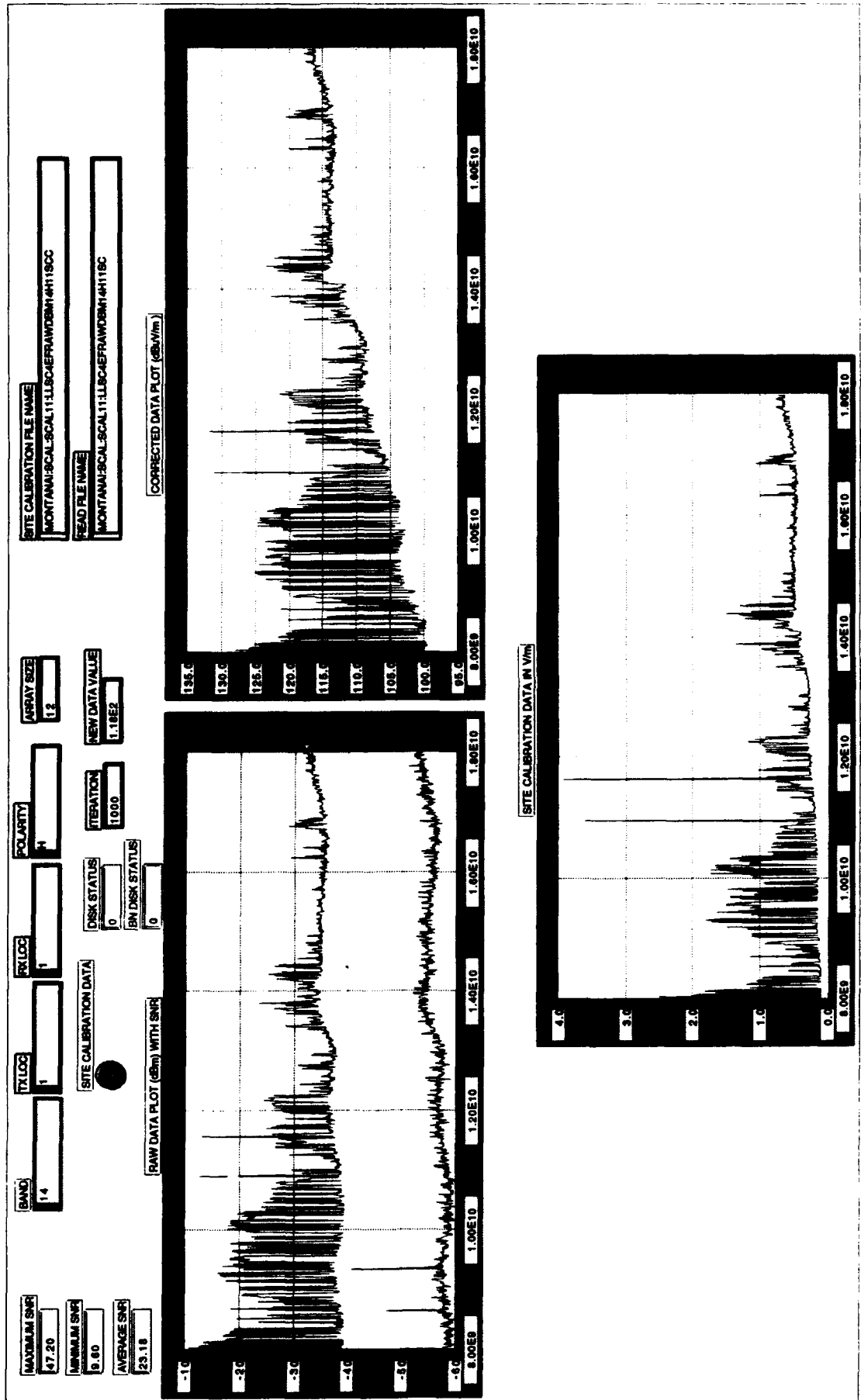


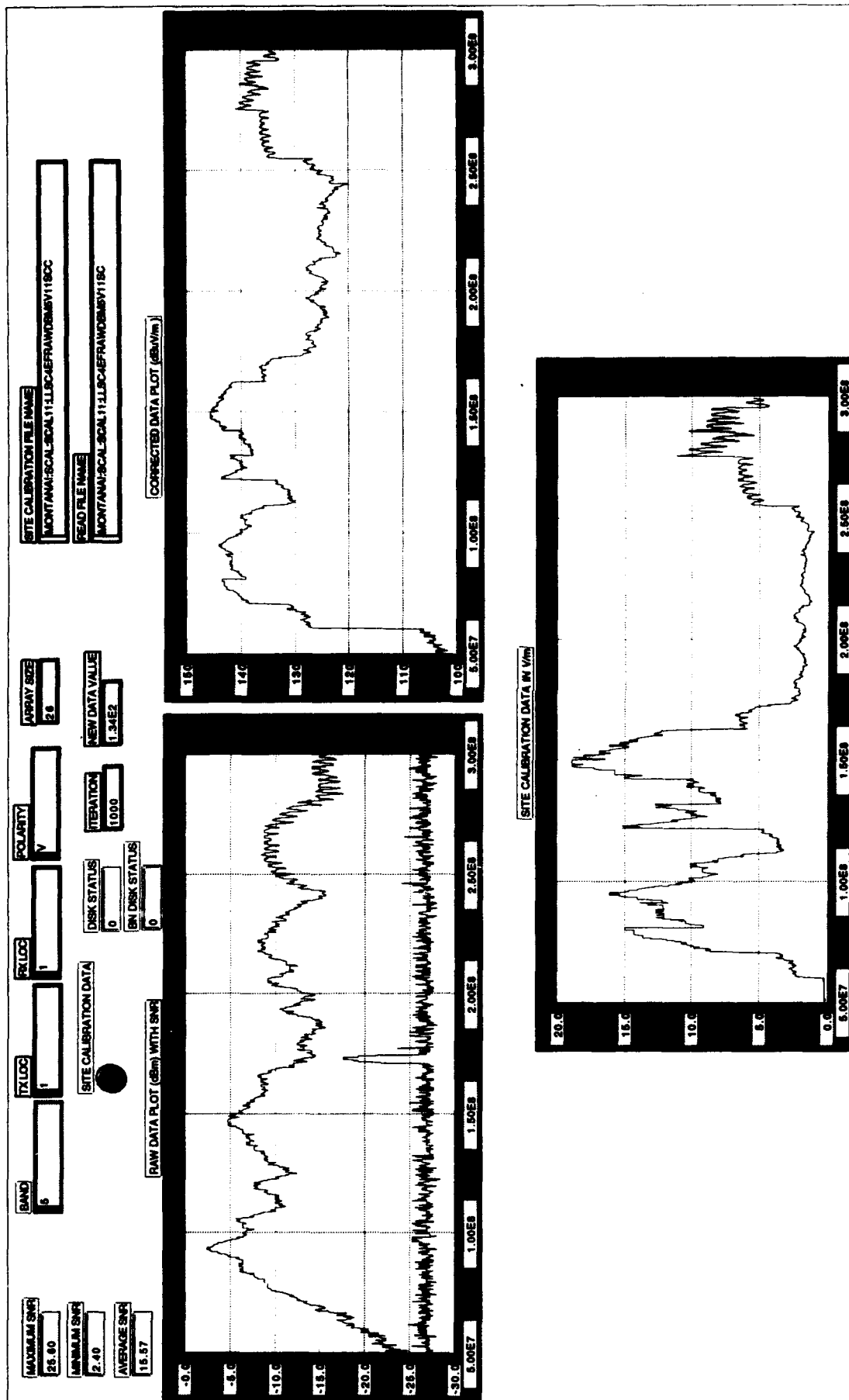


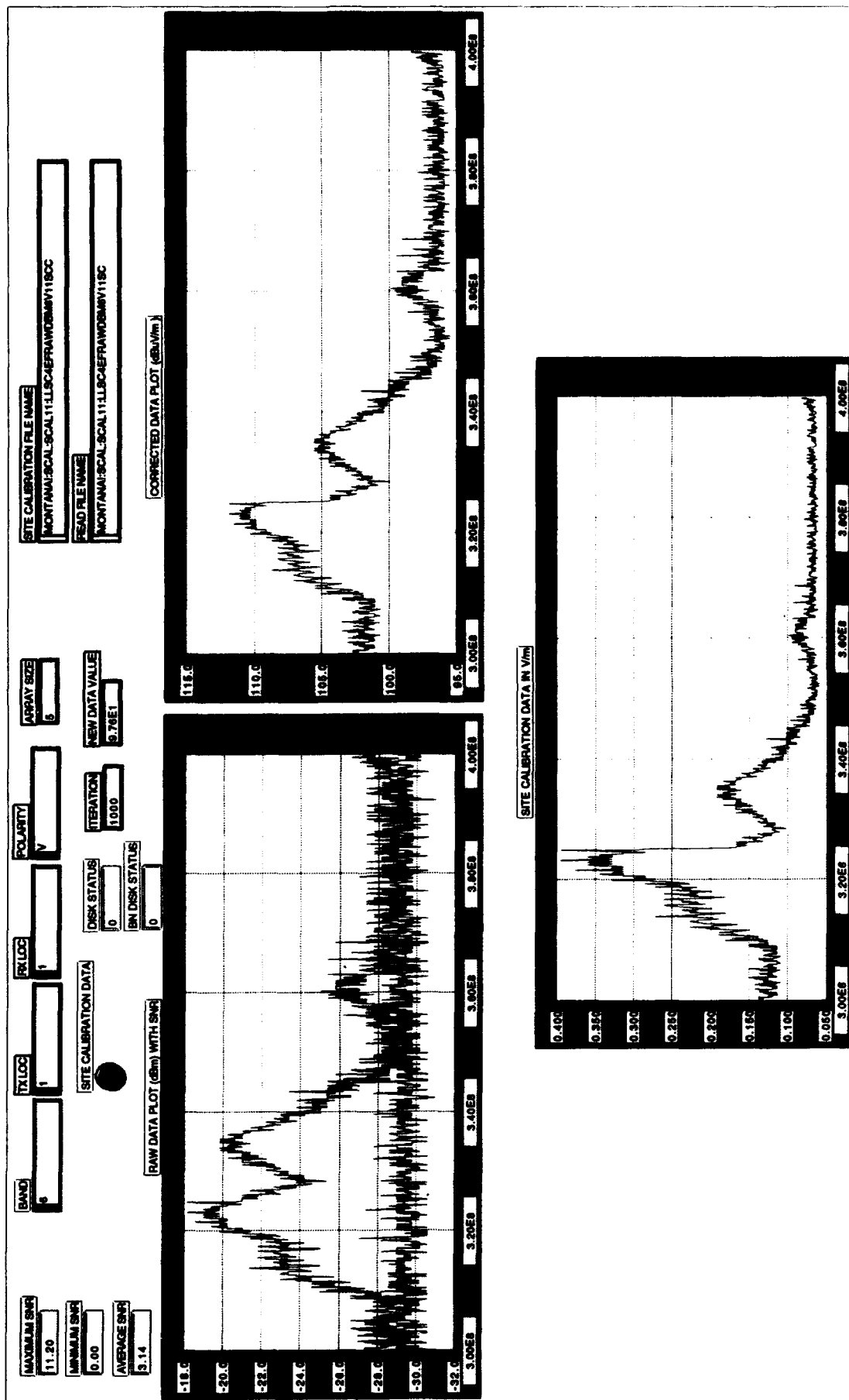


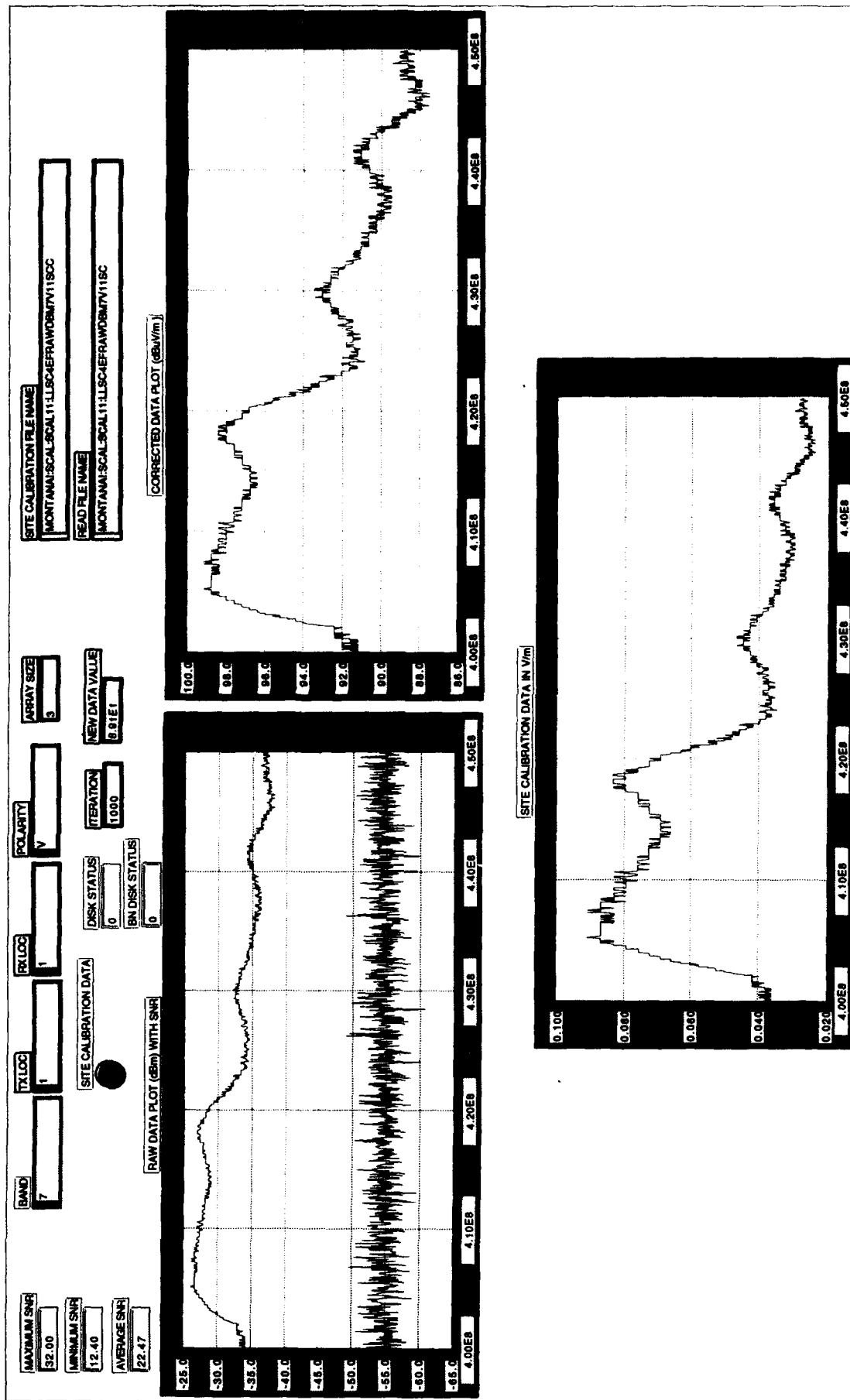


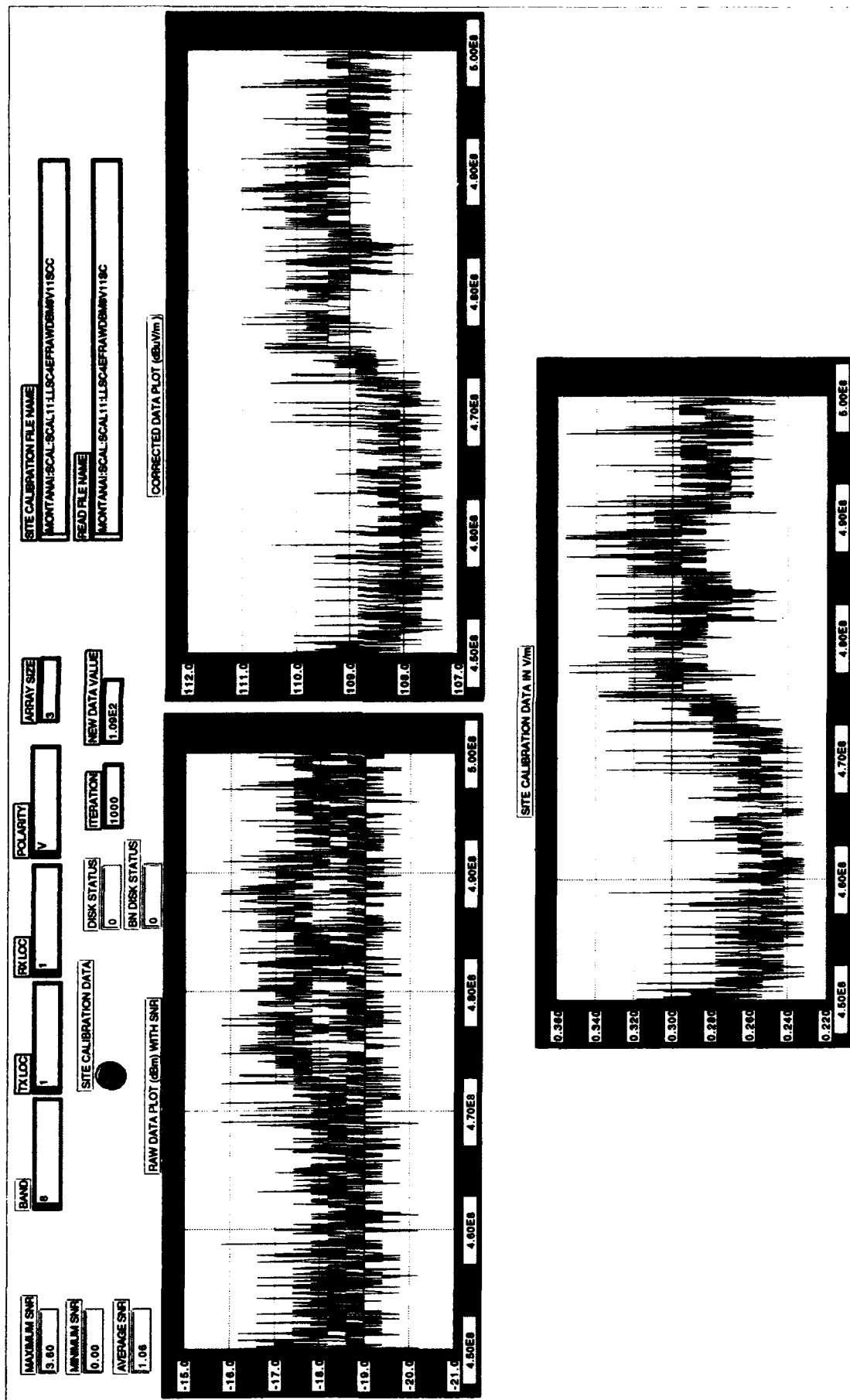


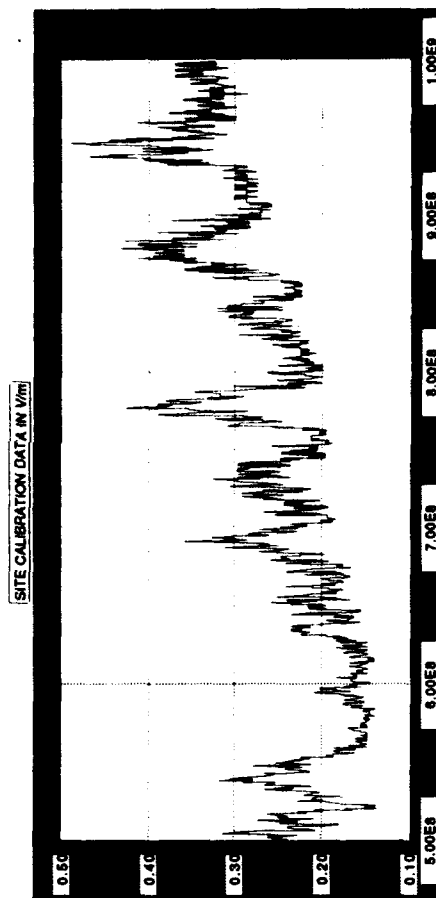
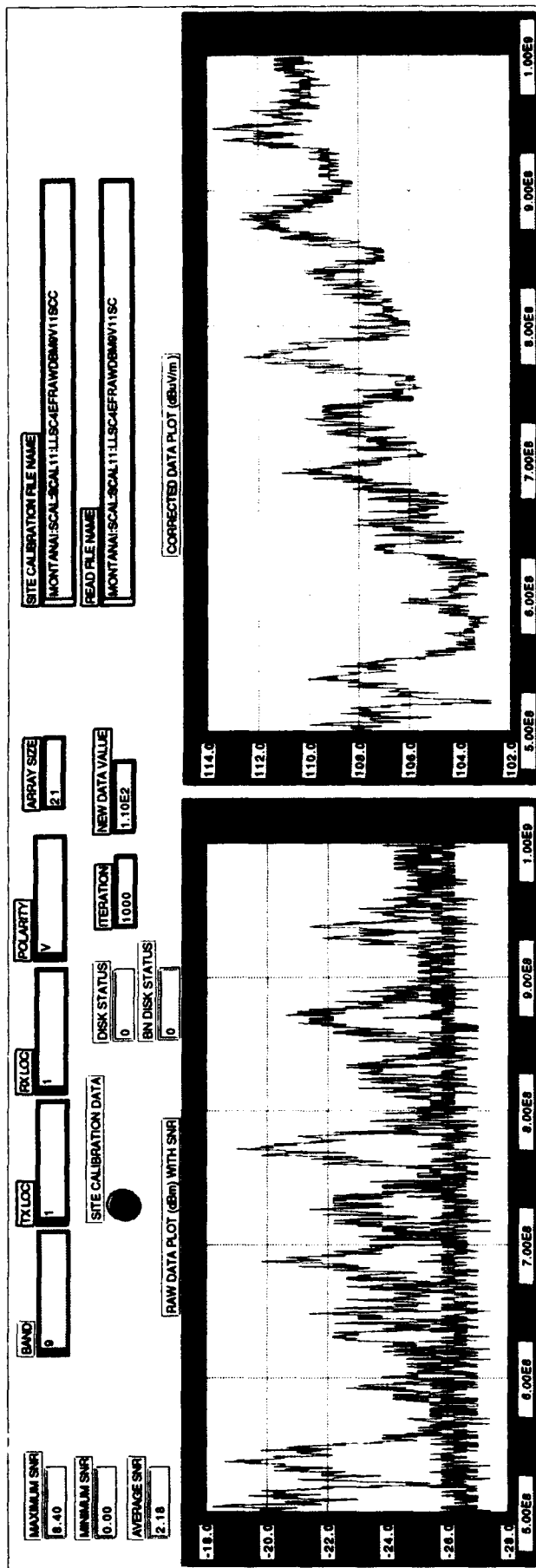


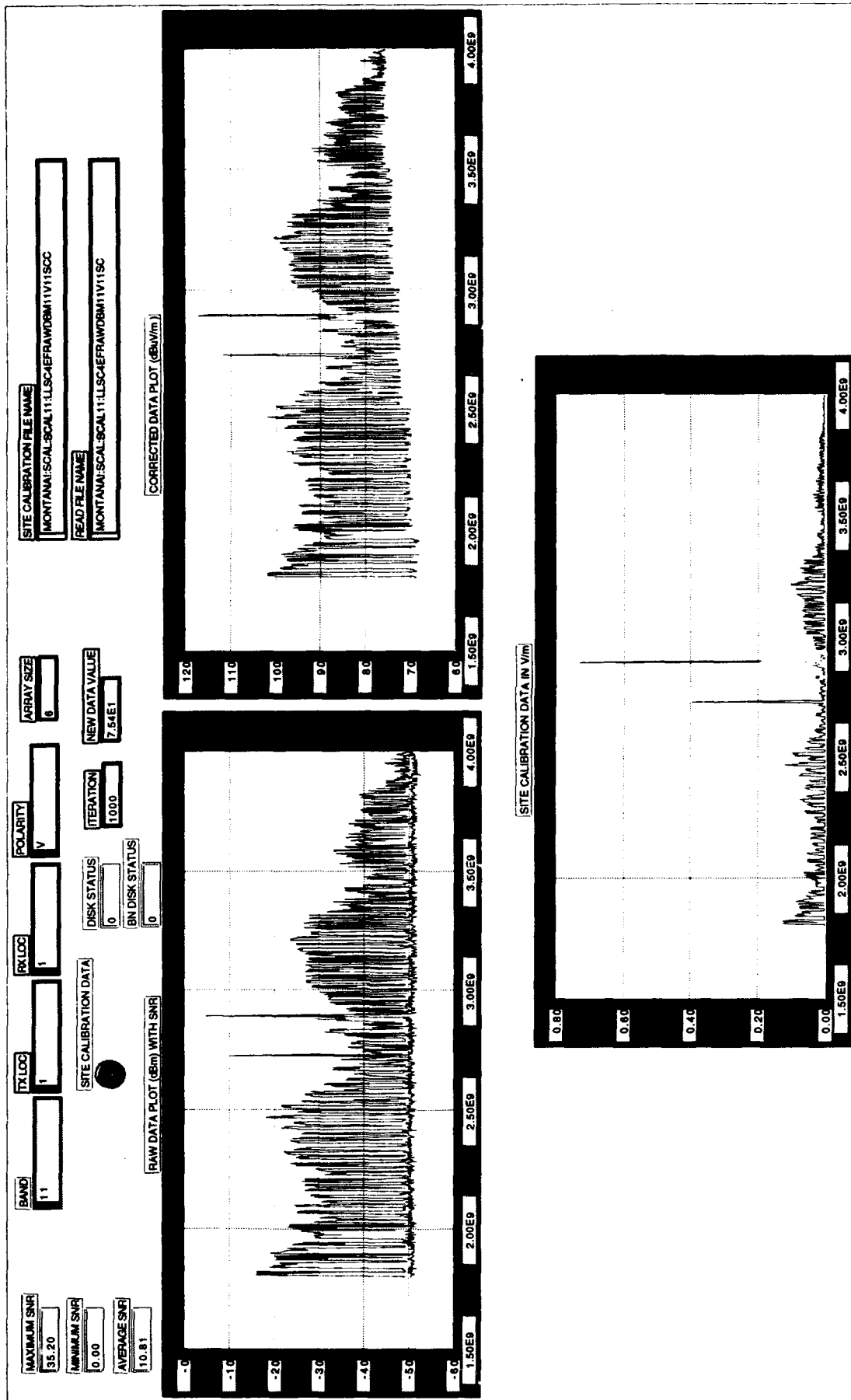


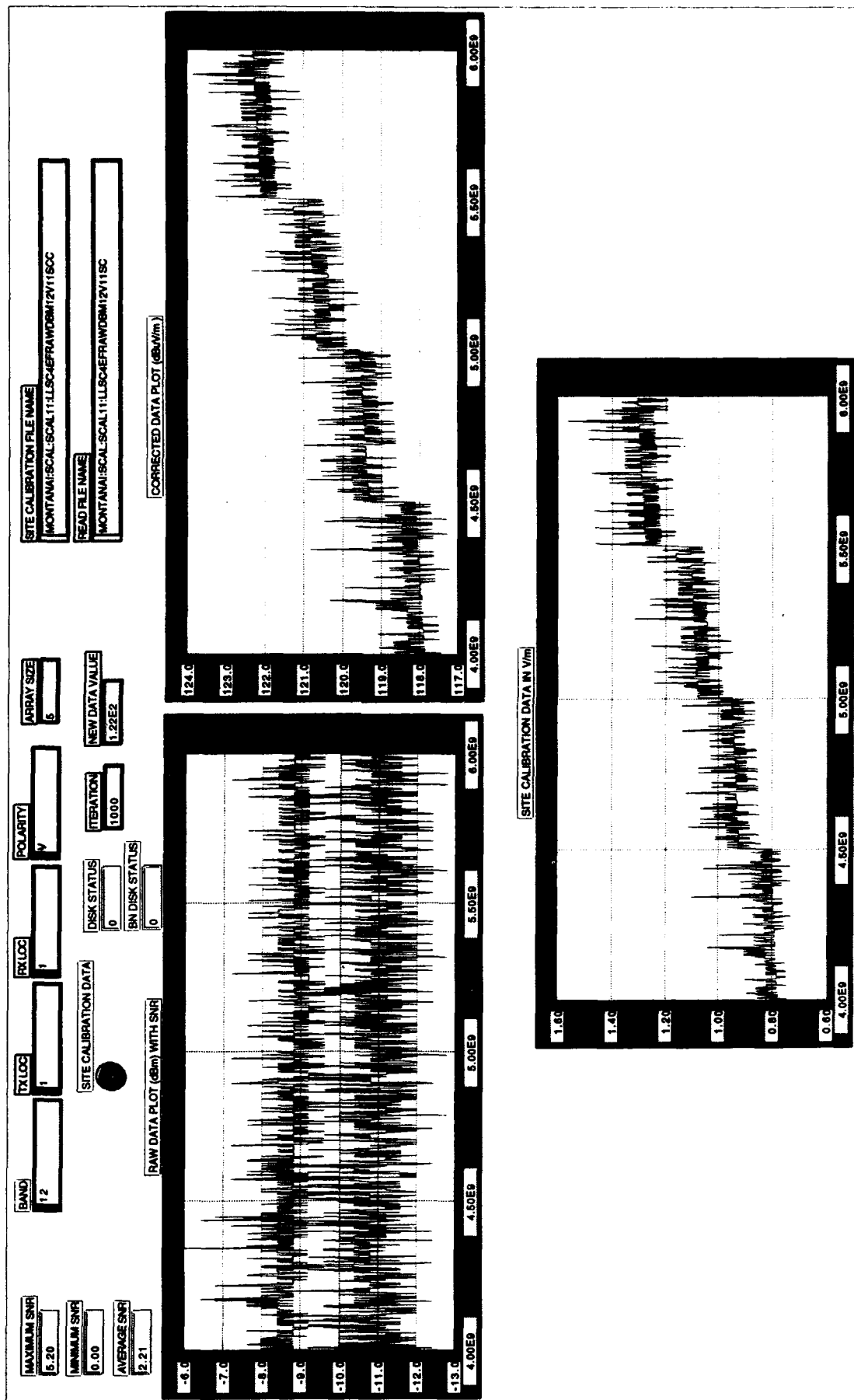


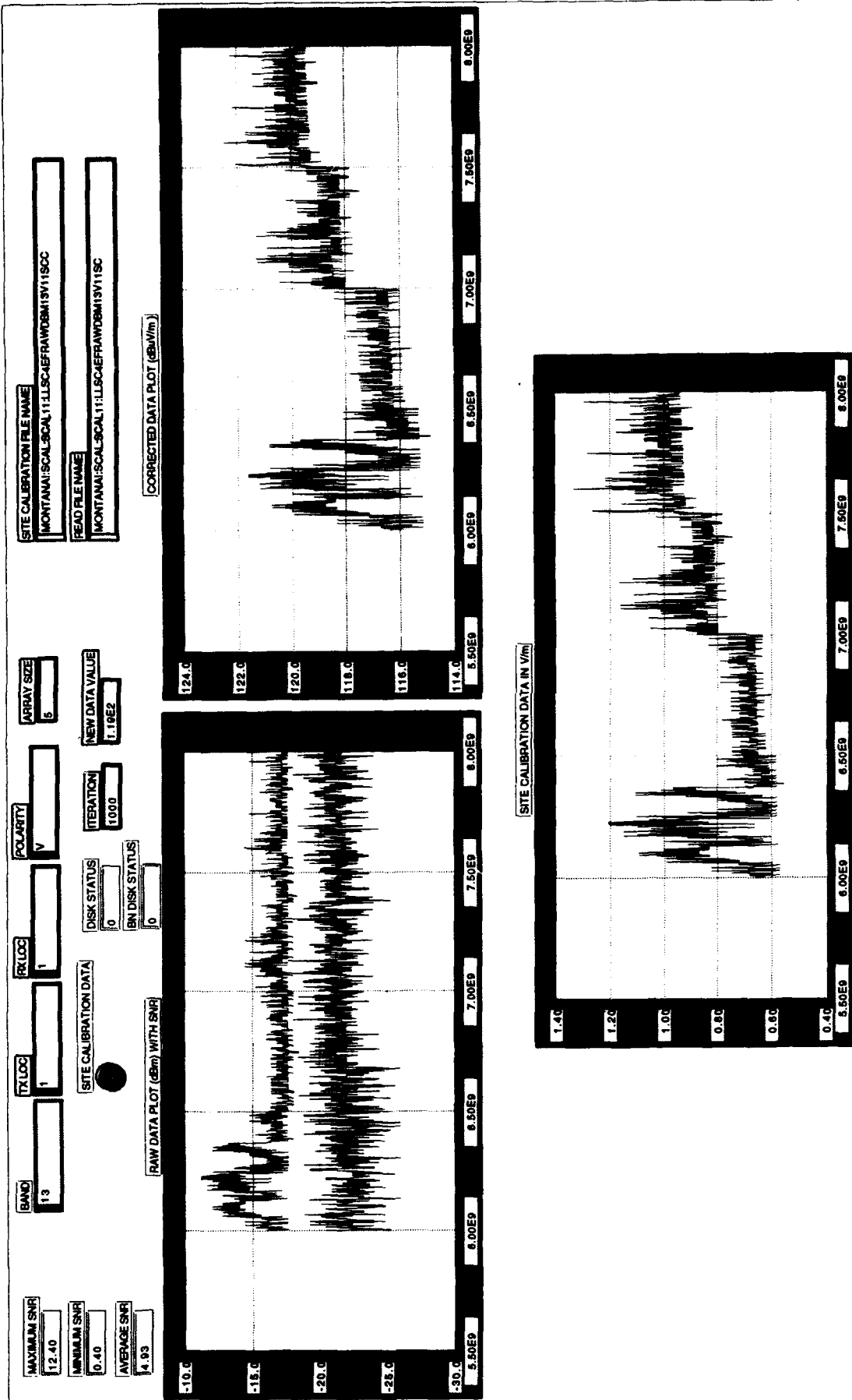


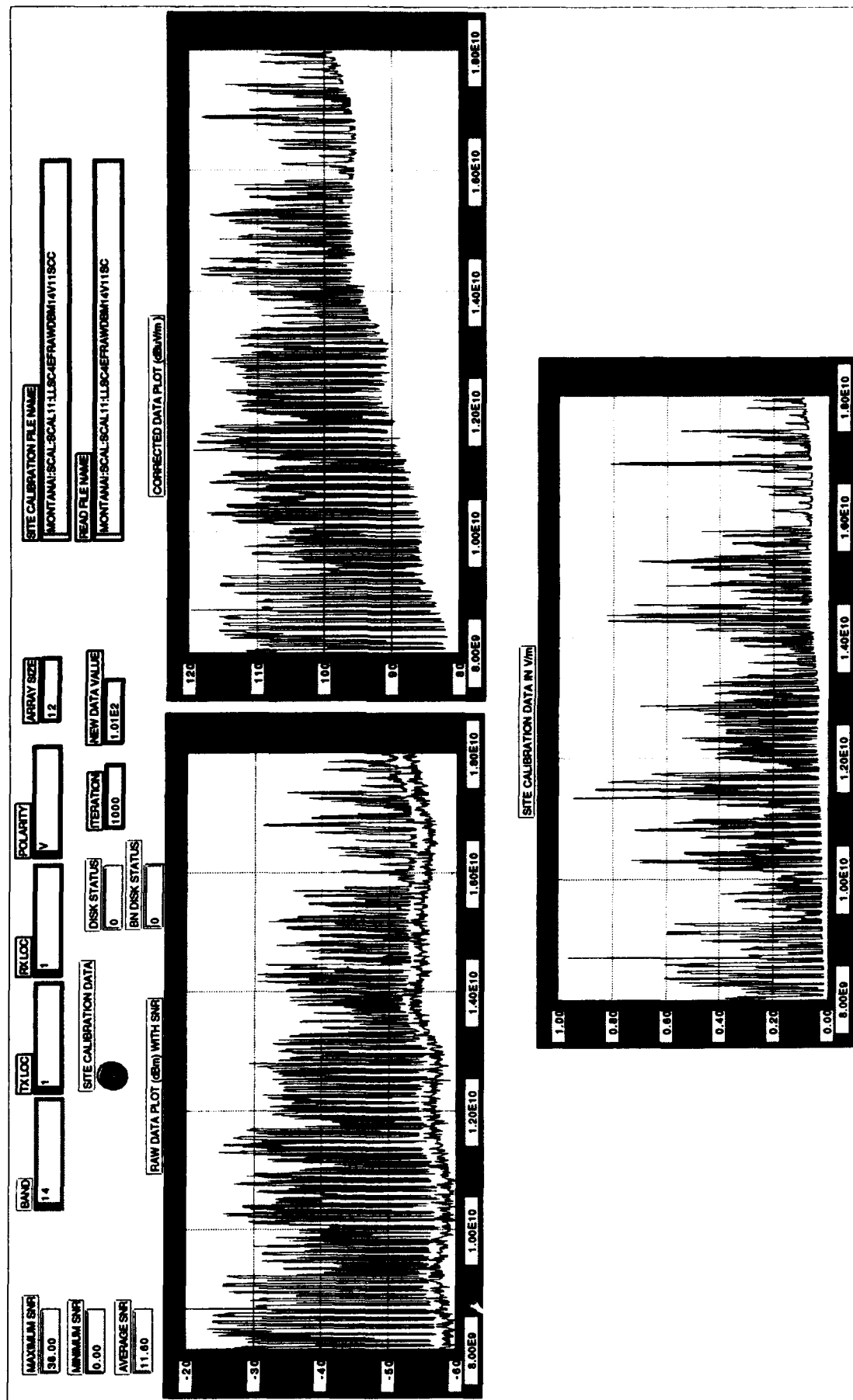




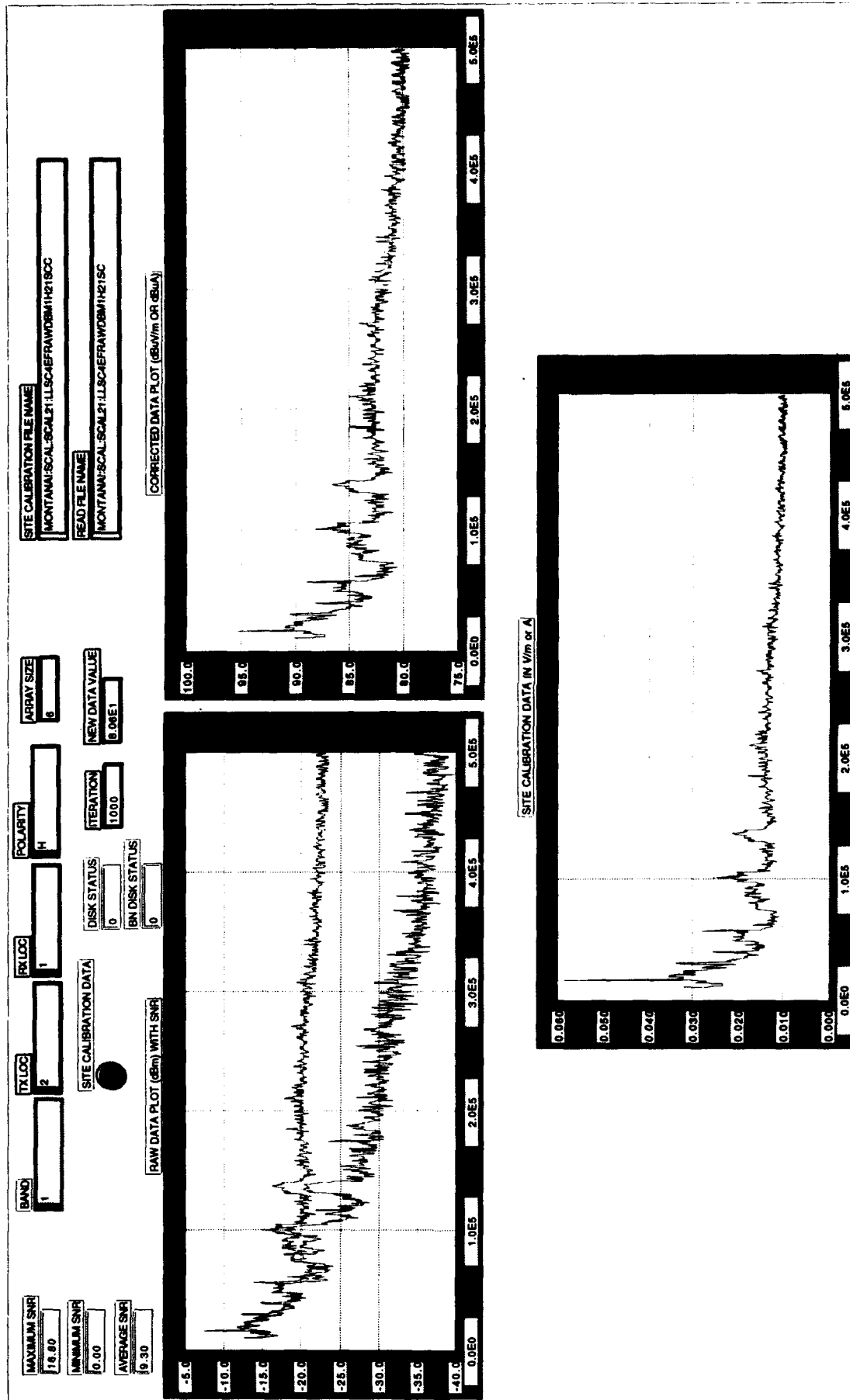


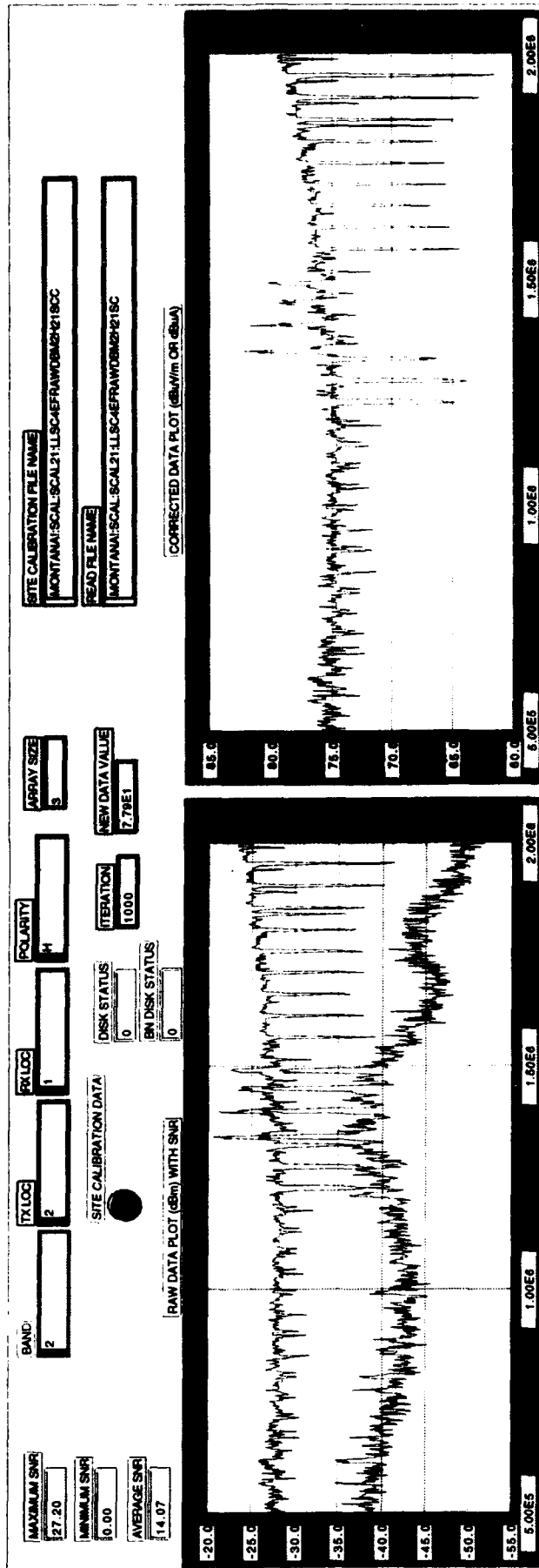




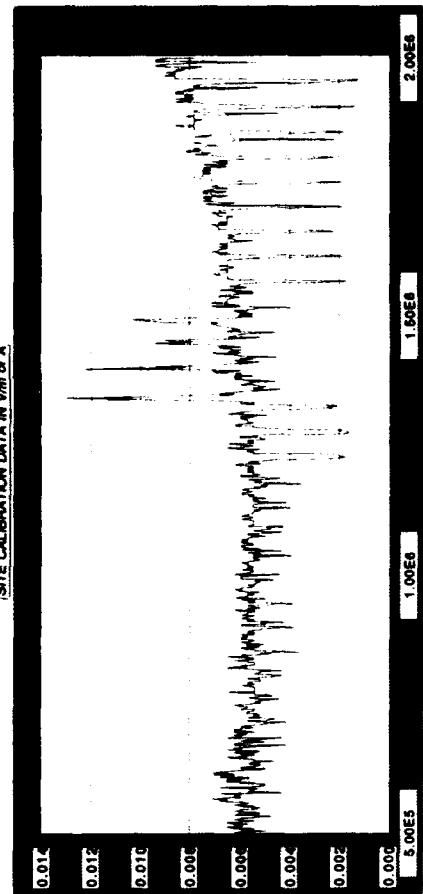


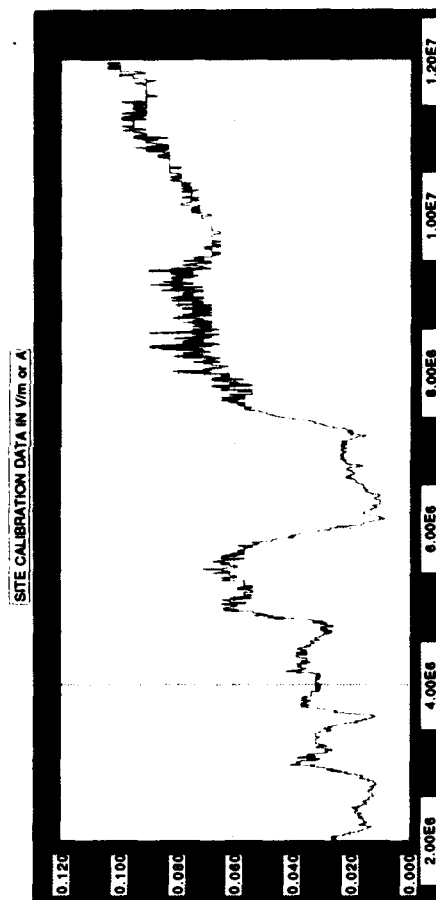
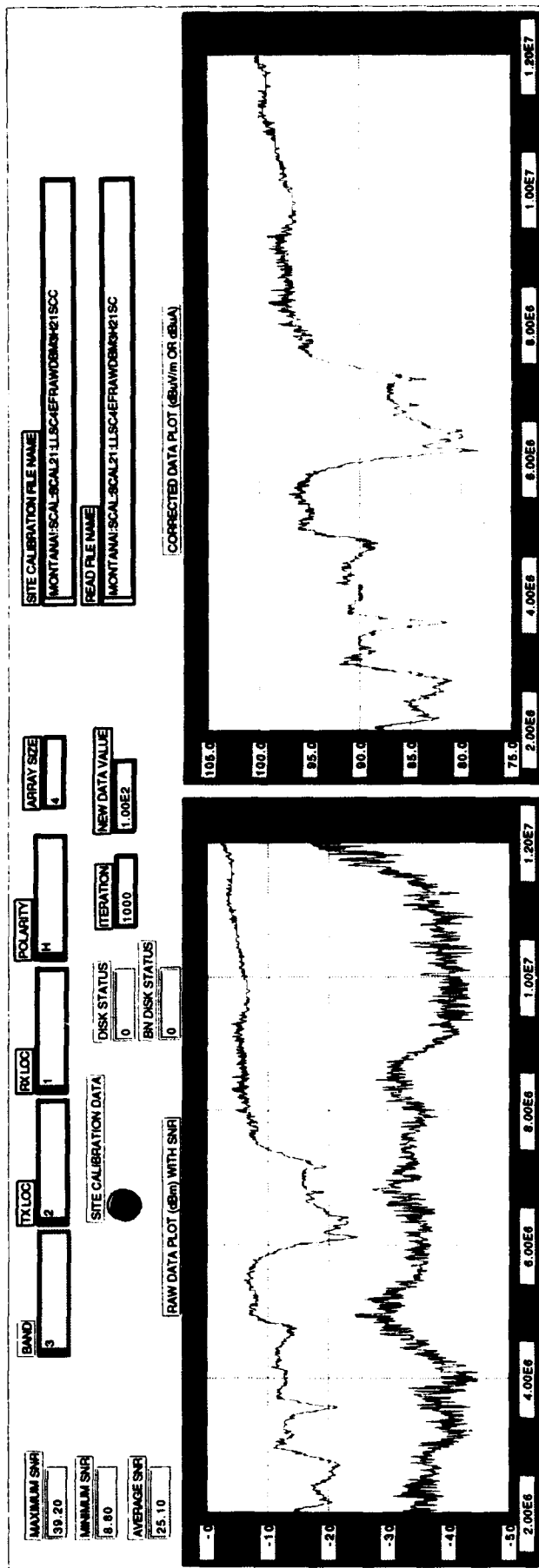
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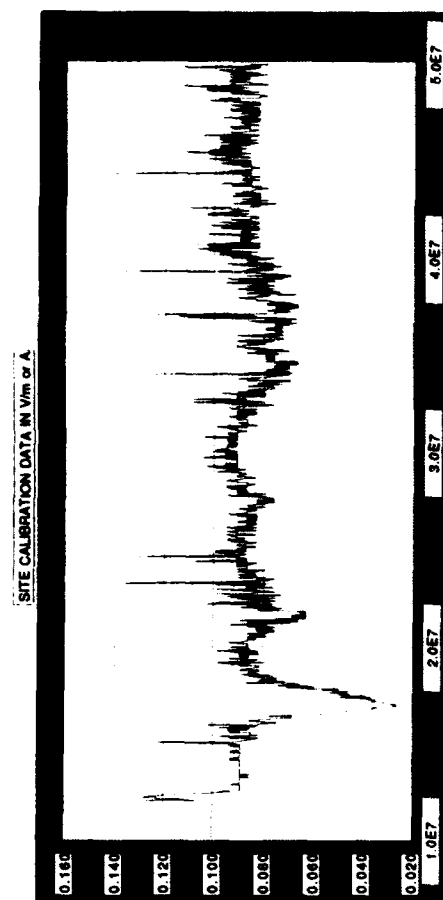
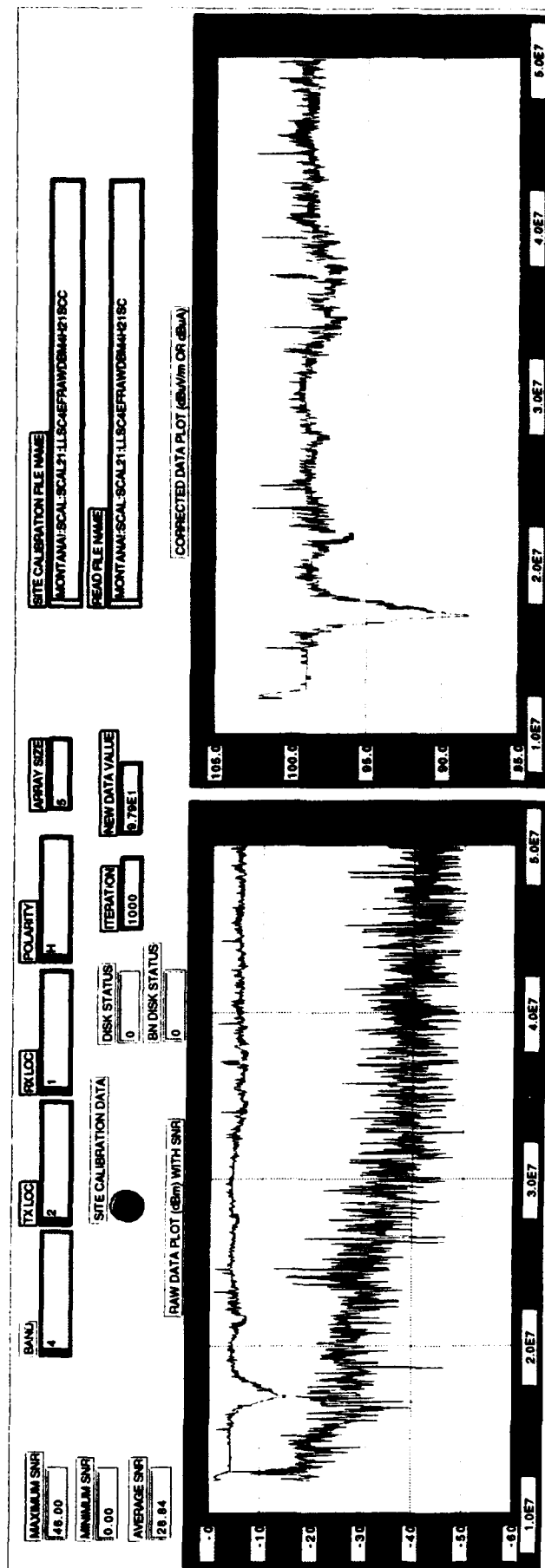


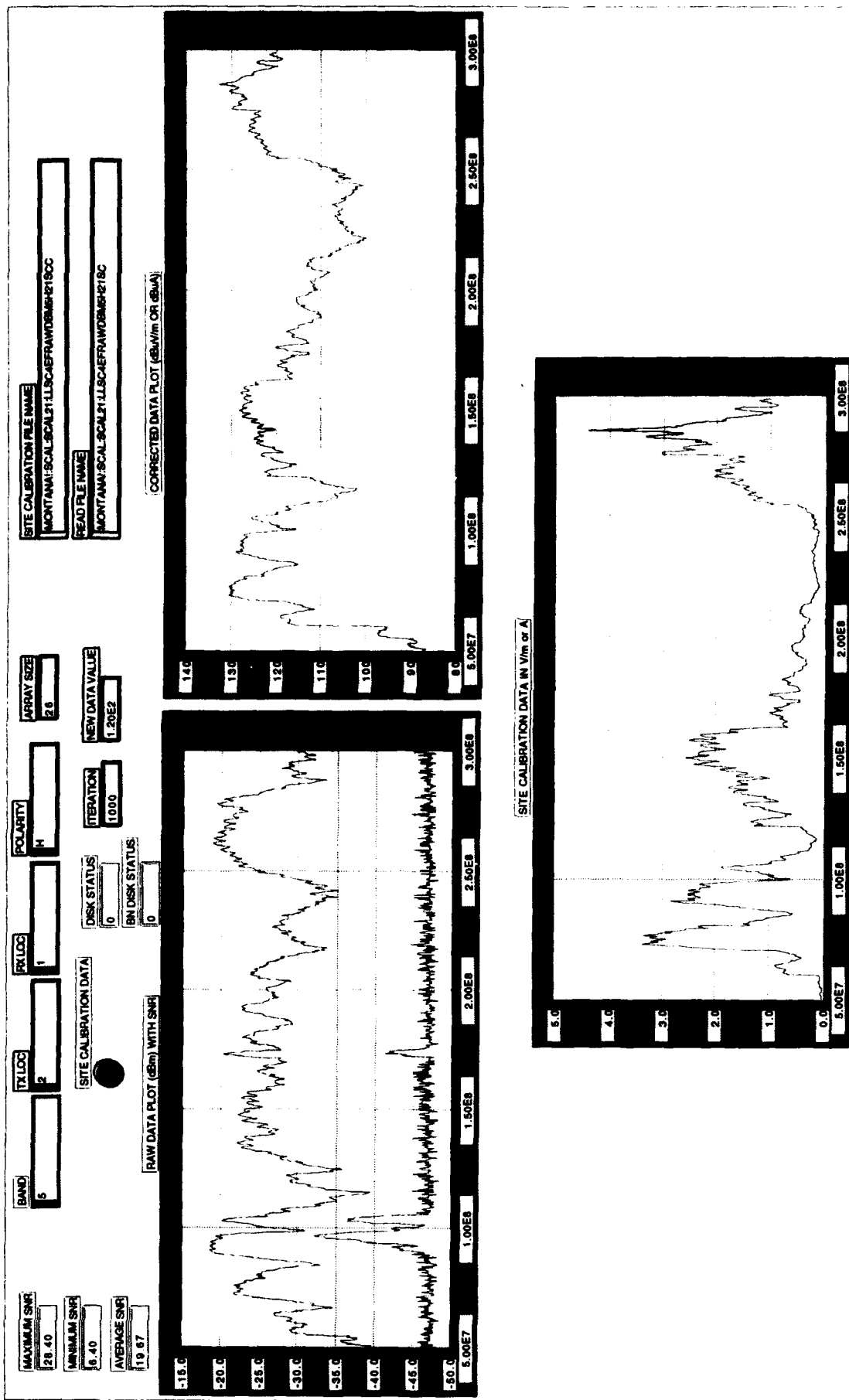


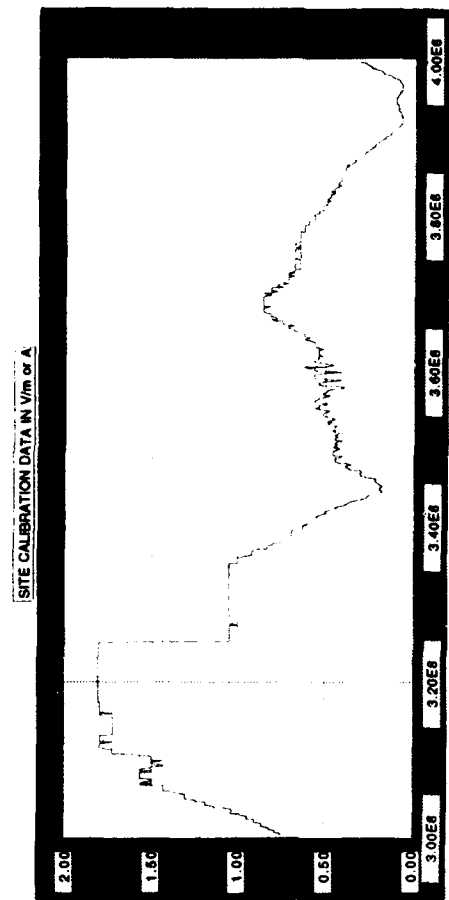
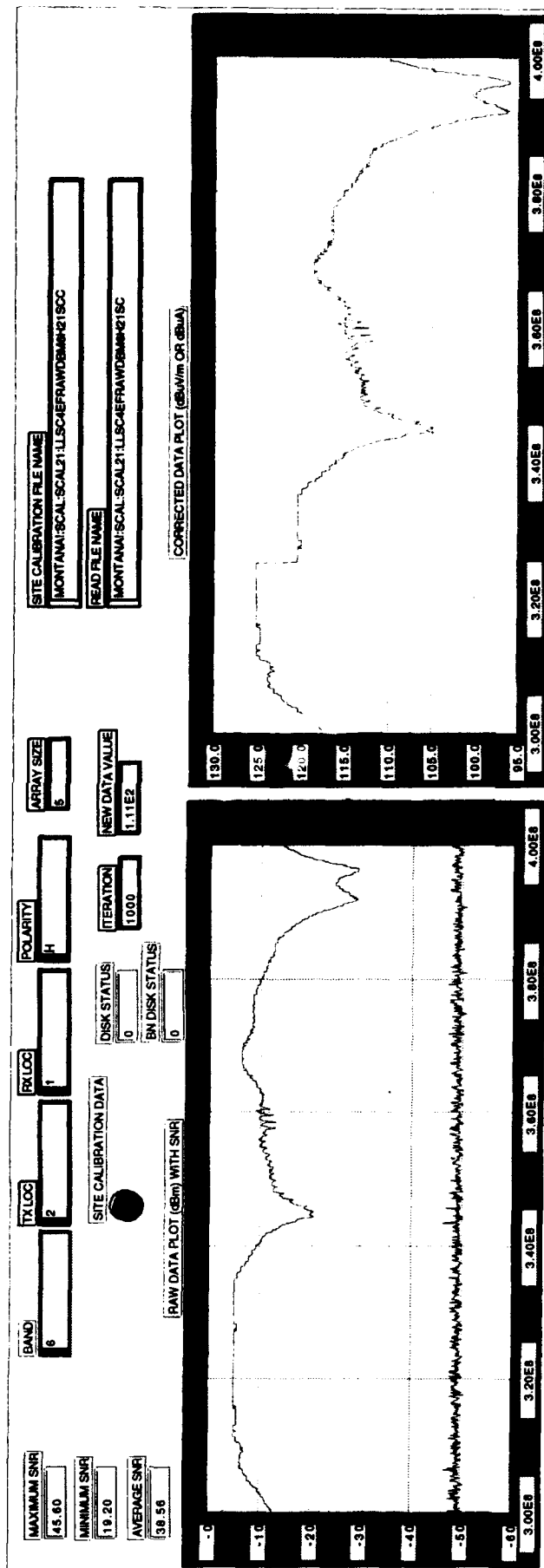
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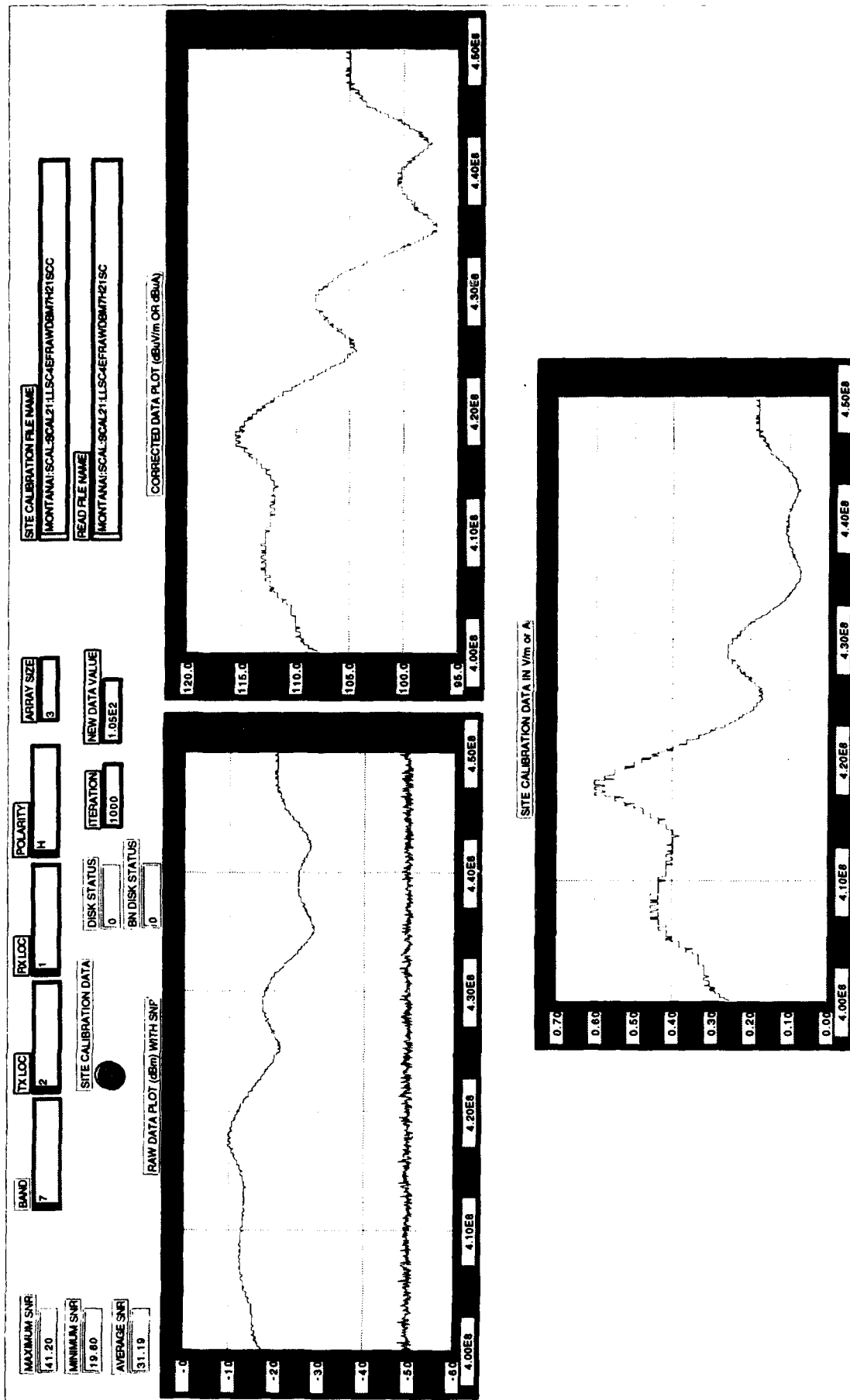


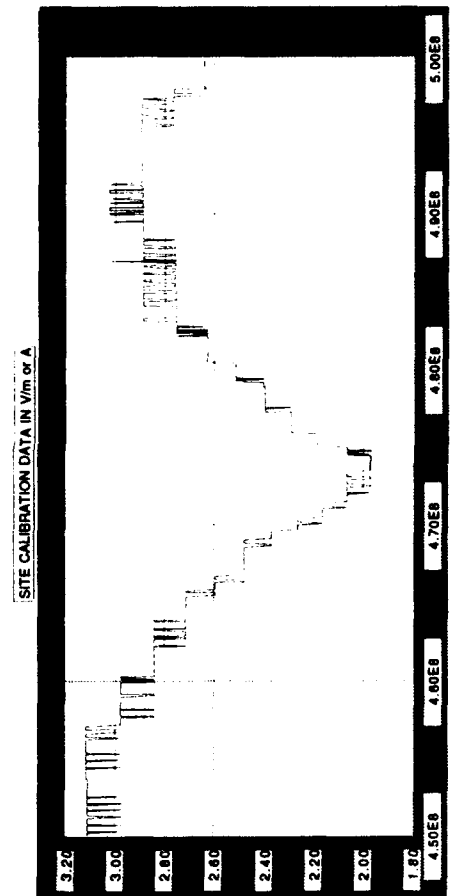
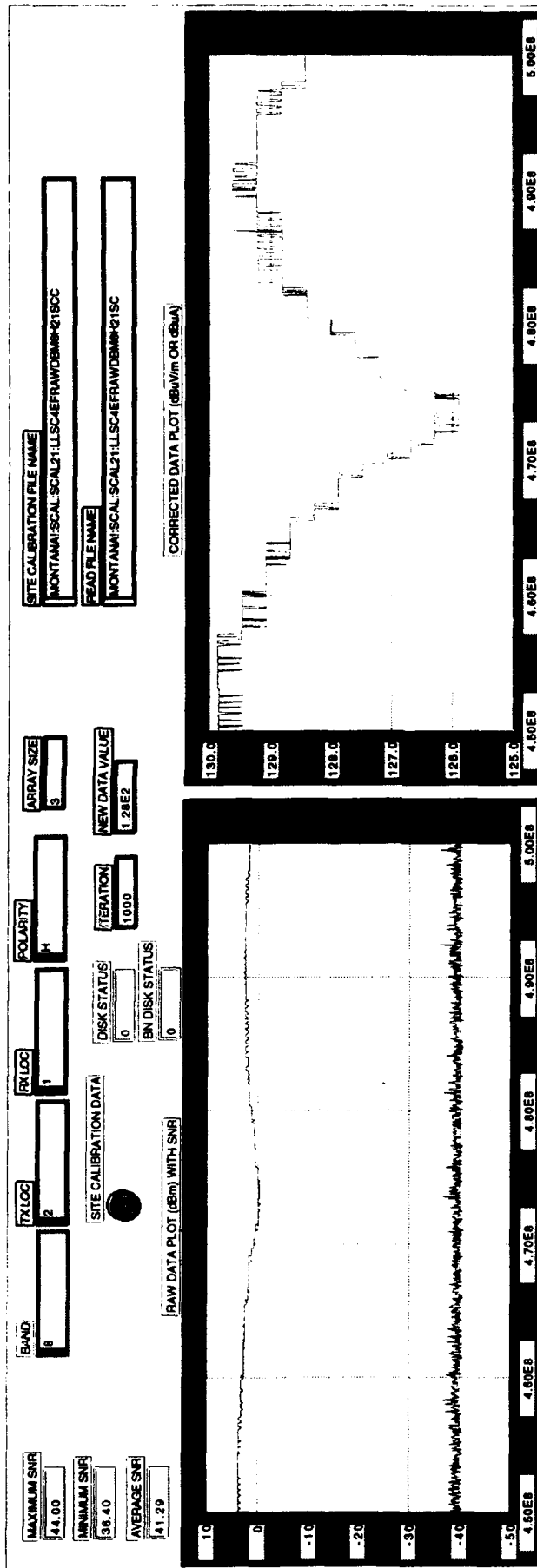


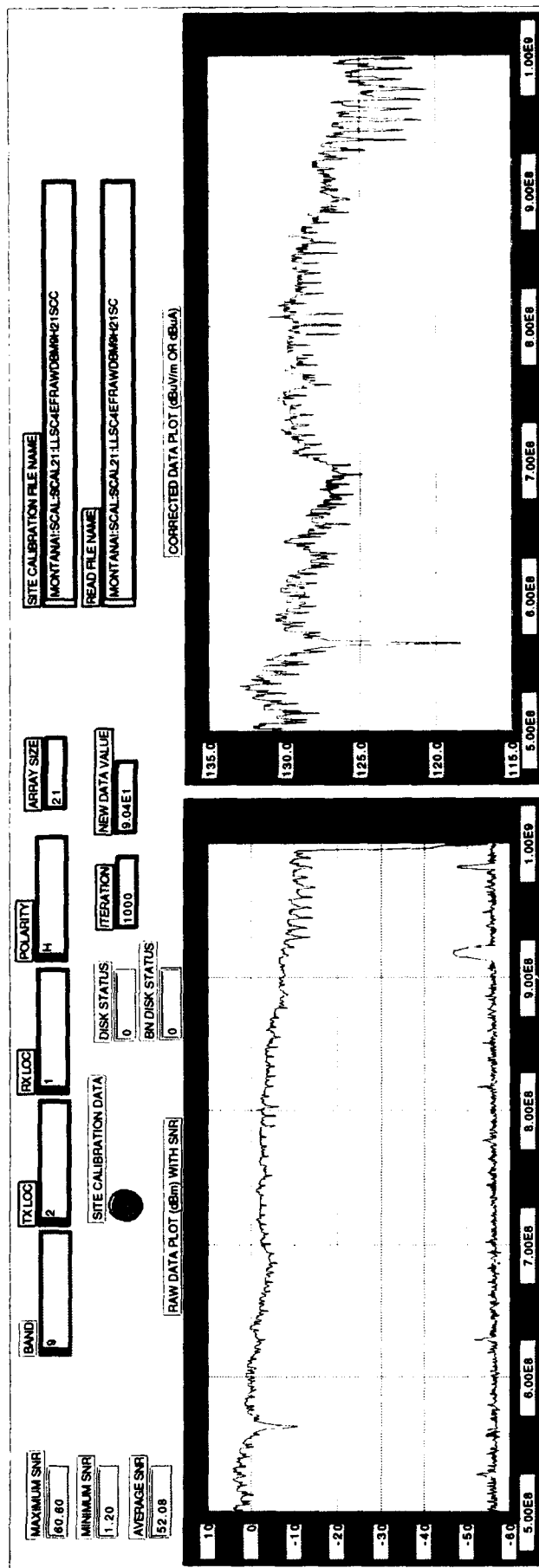




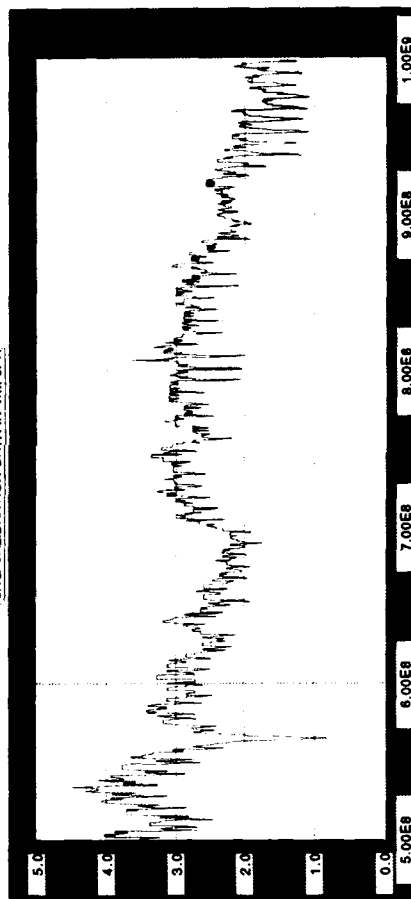


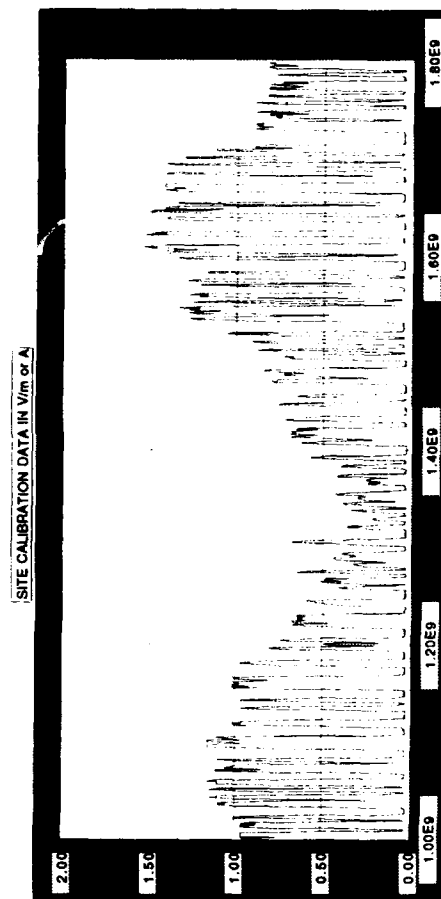
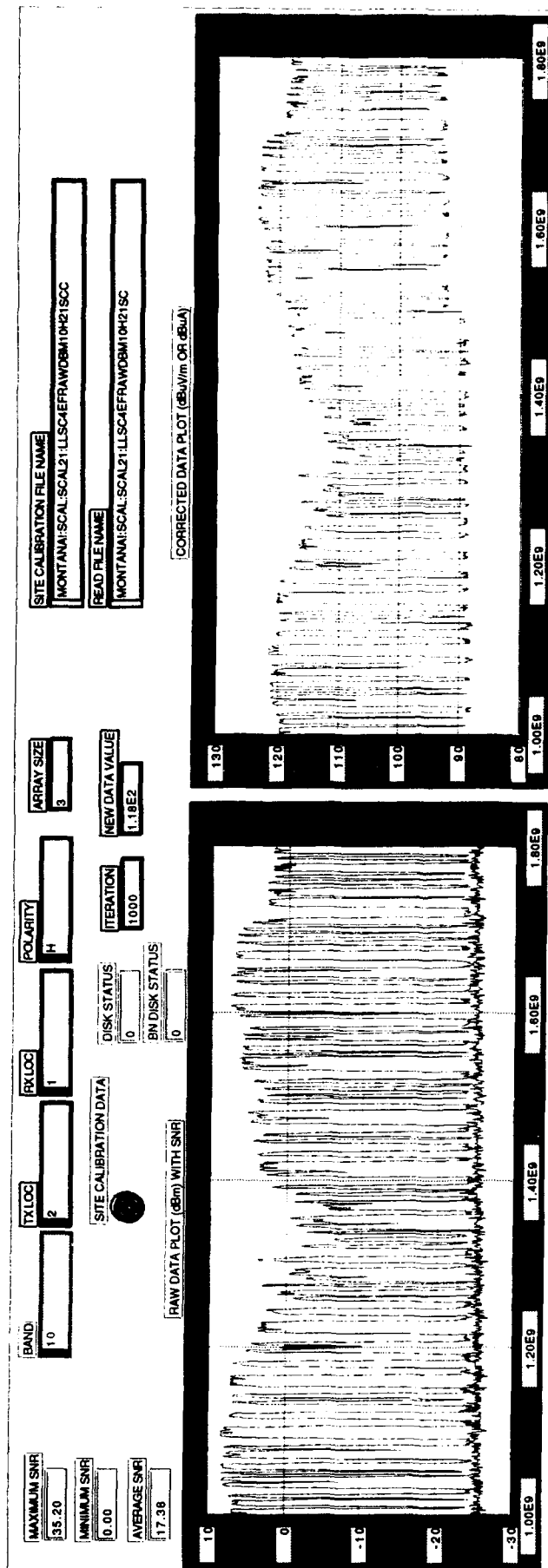


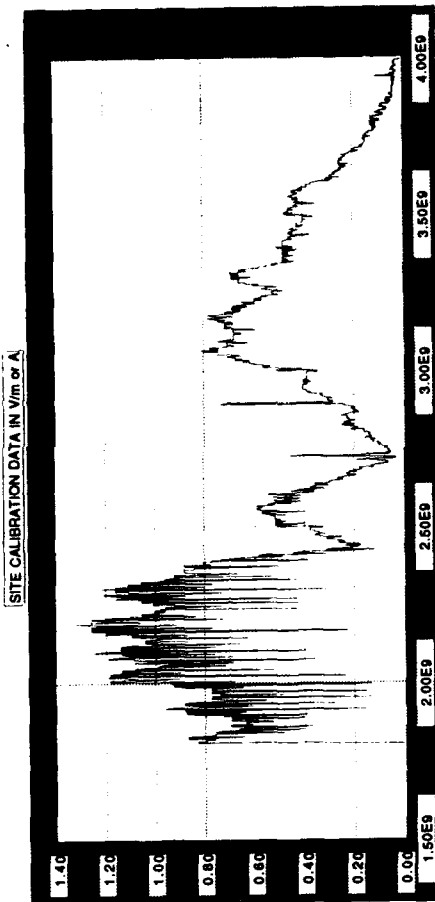
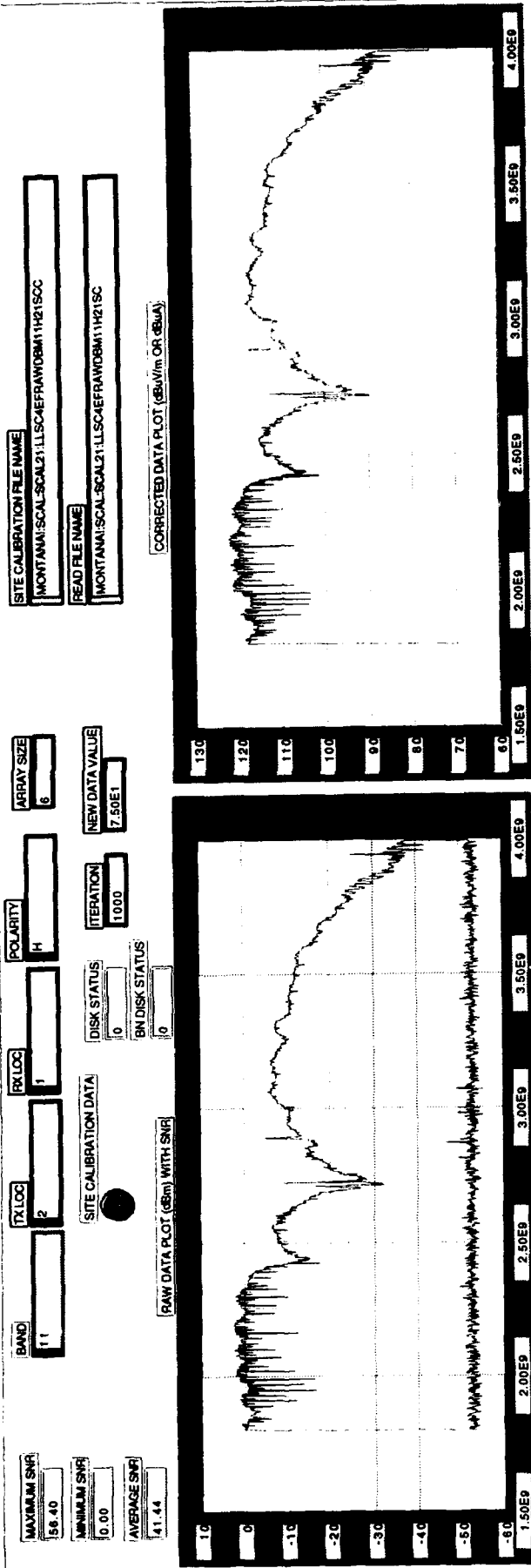




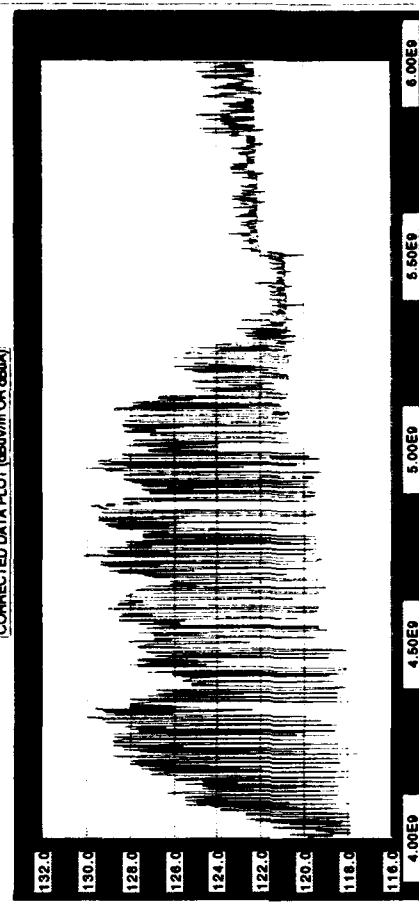
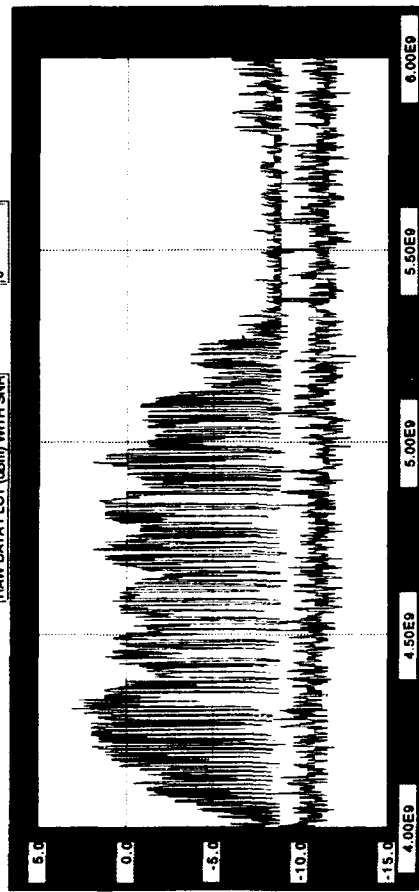
SITE CALIBRATION DATA IN V/m or A



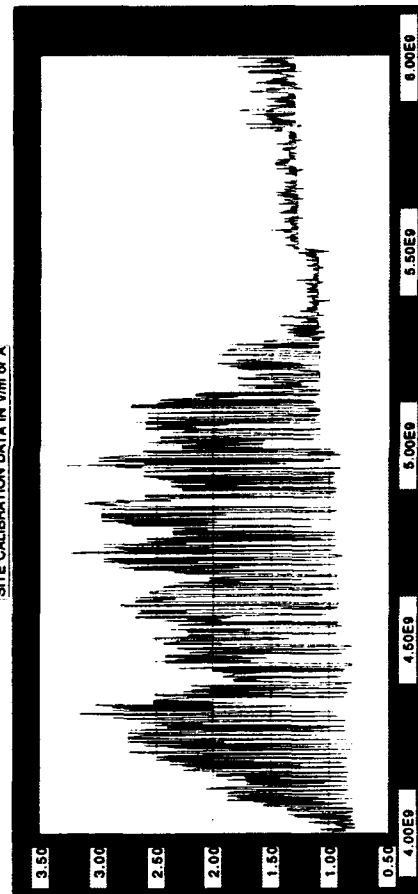


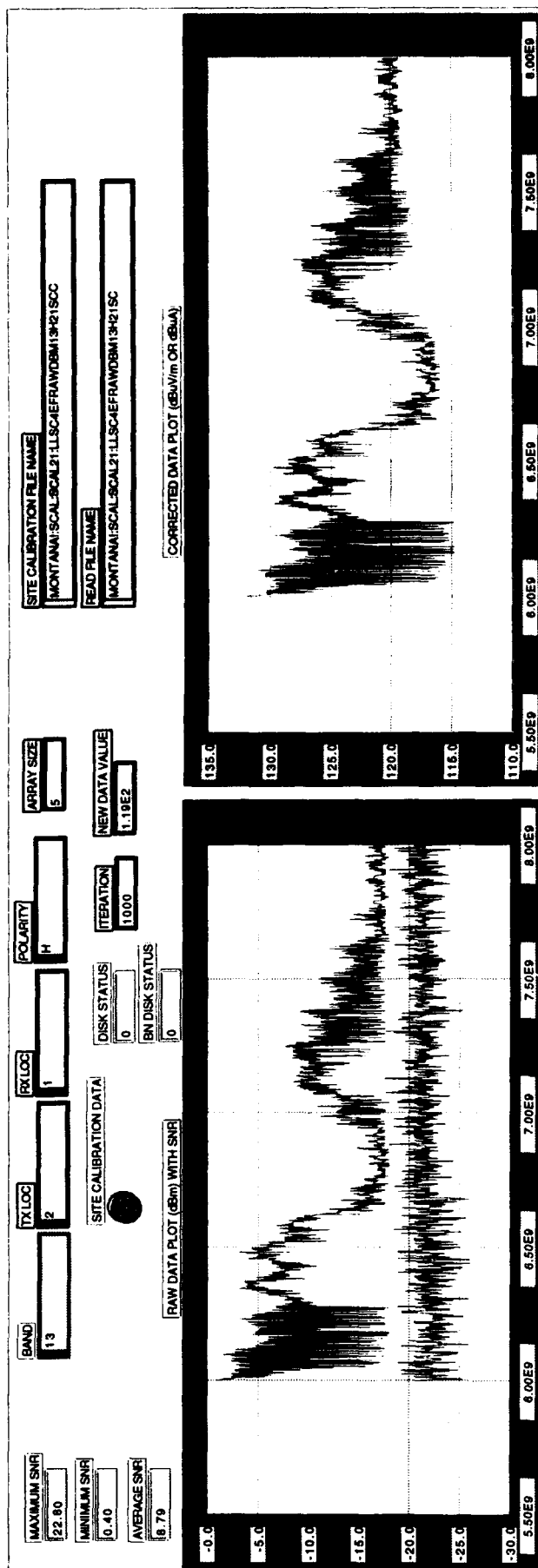


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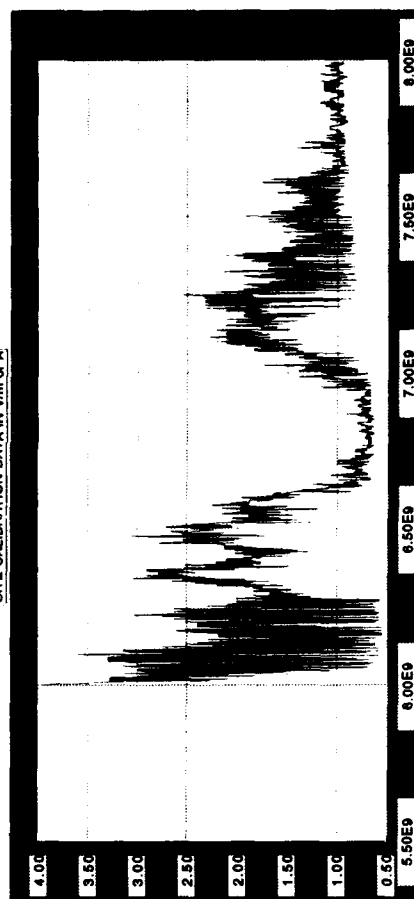


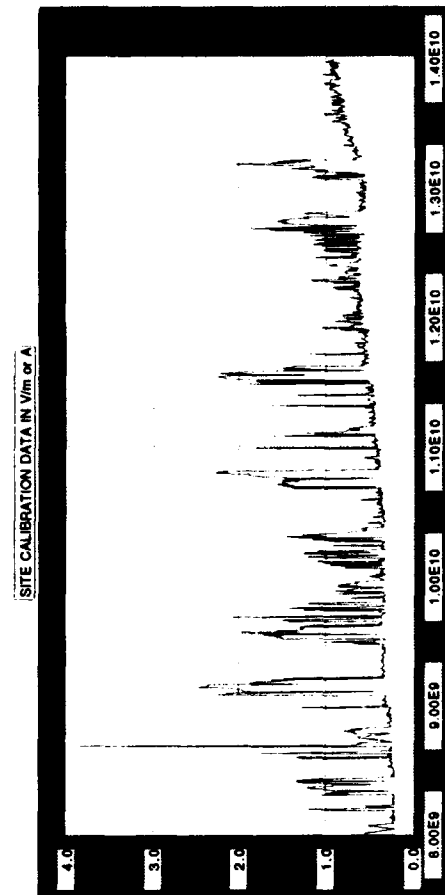
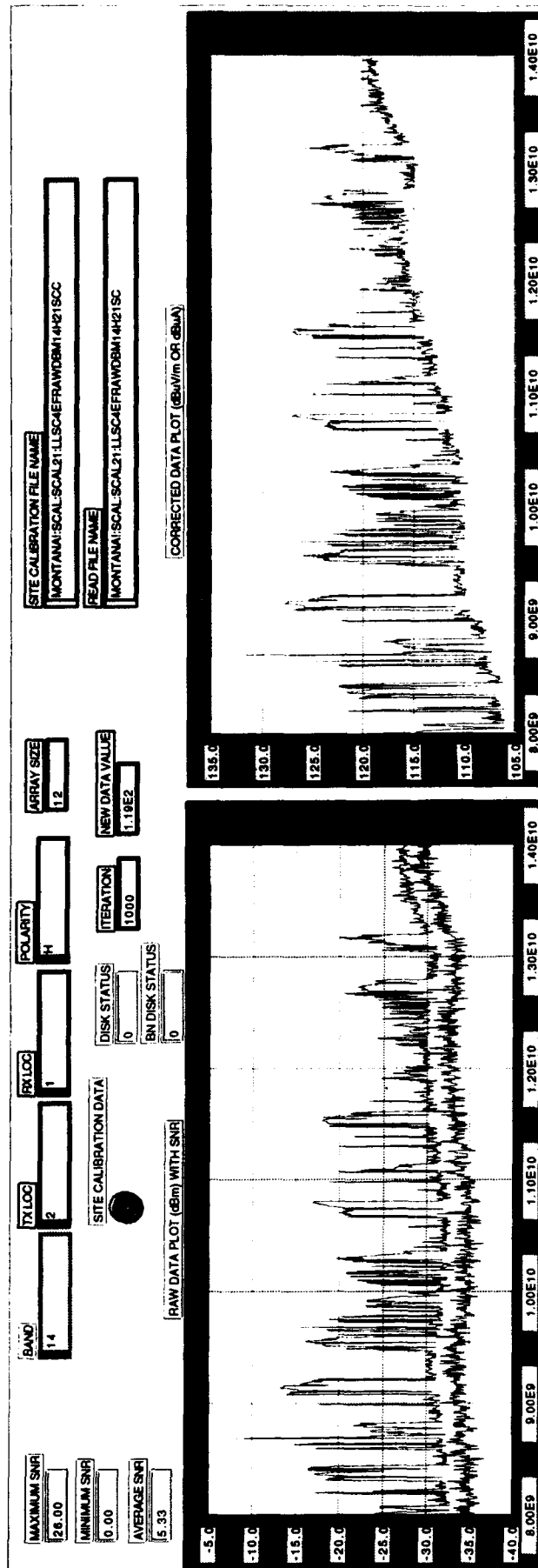
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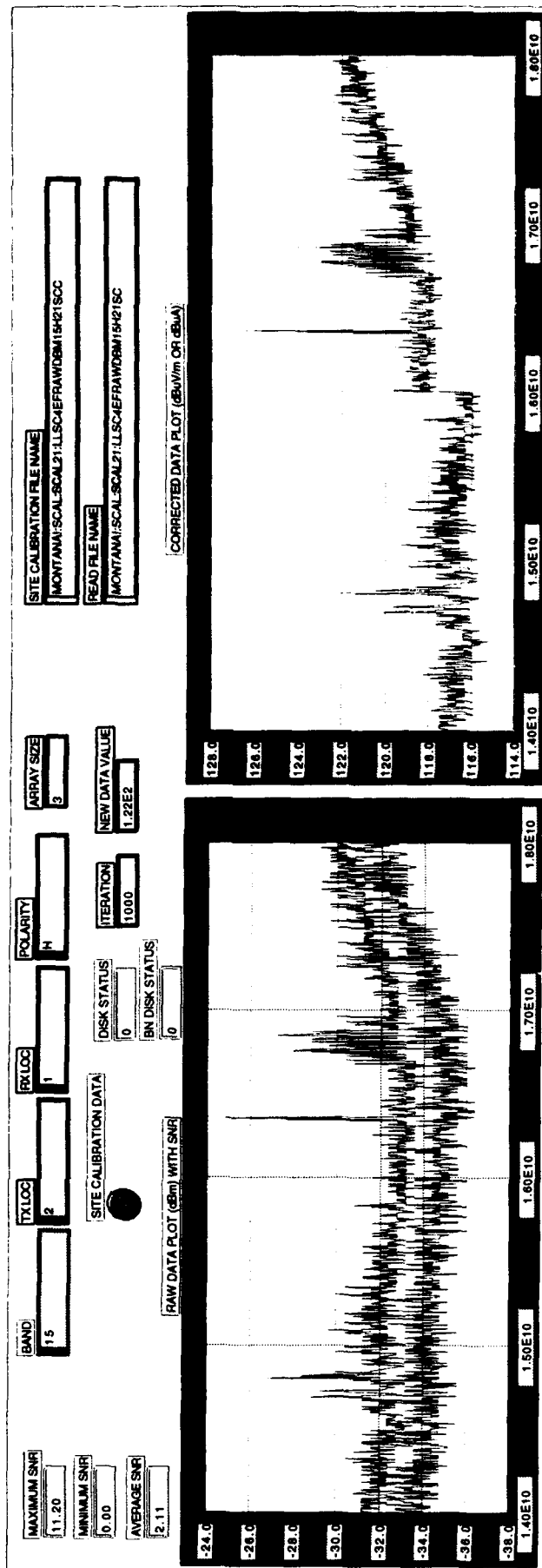




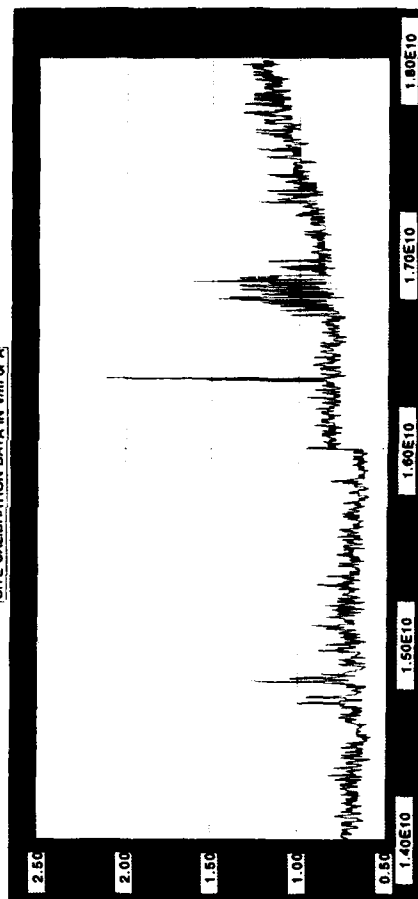
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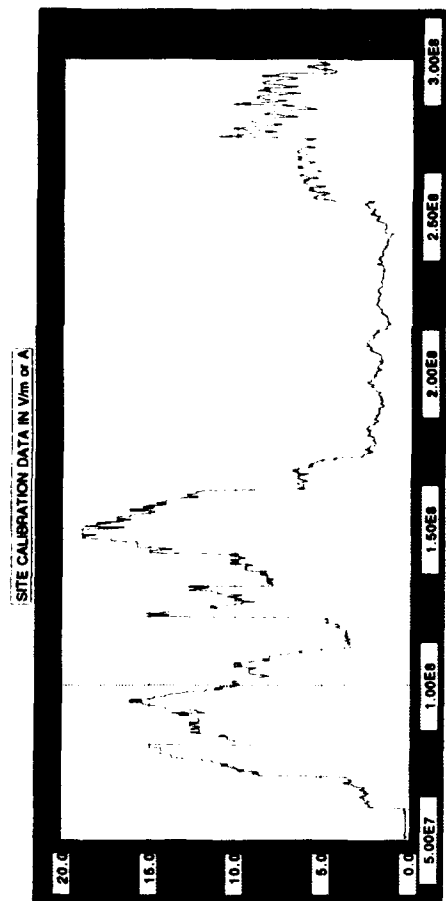
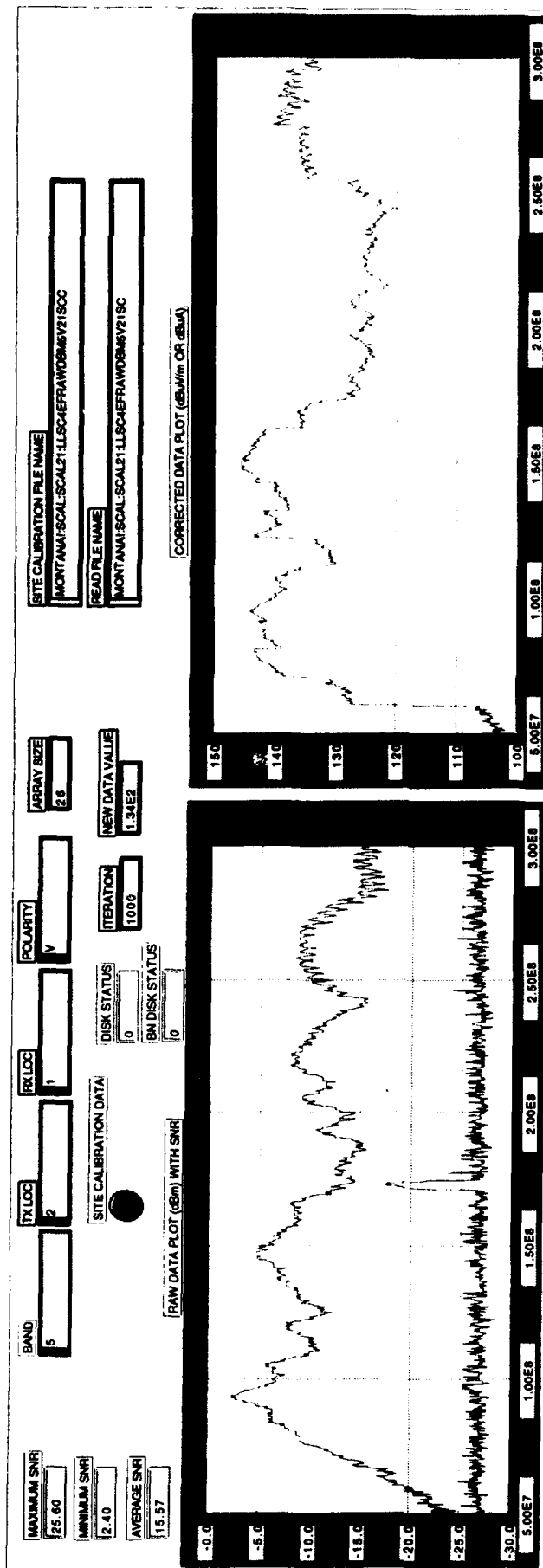


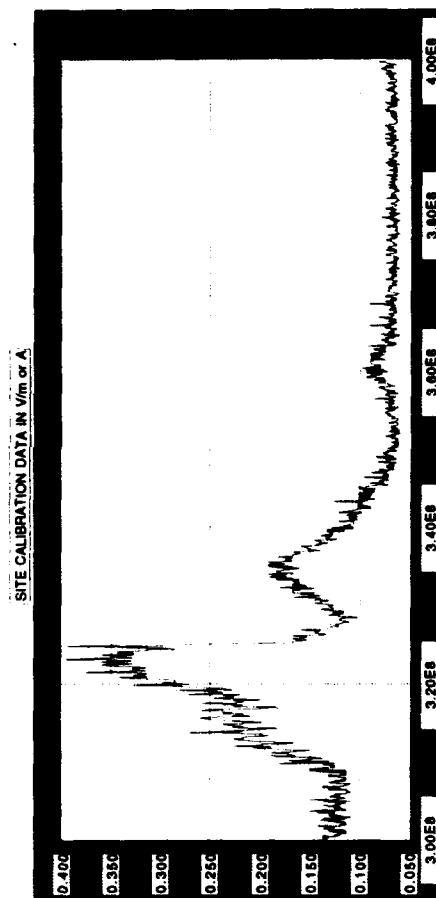
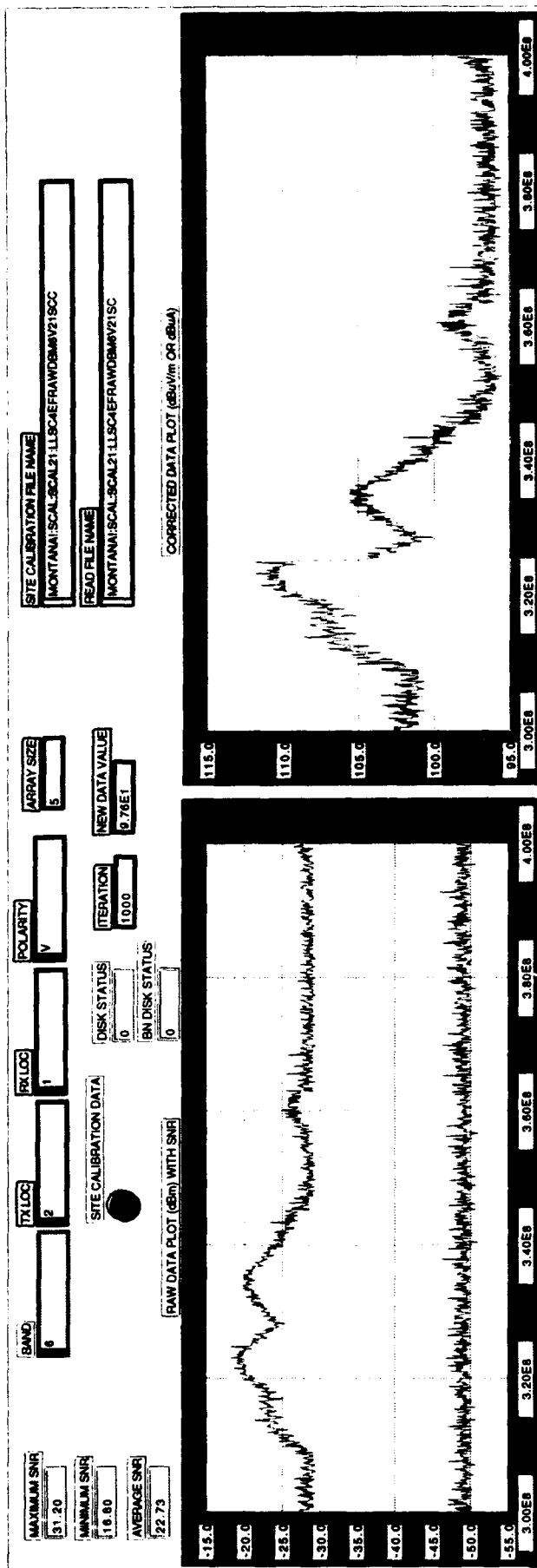


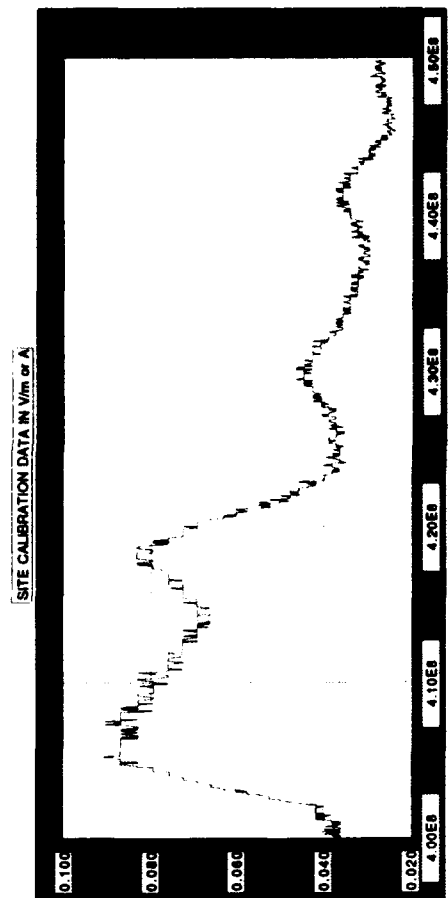
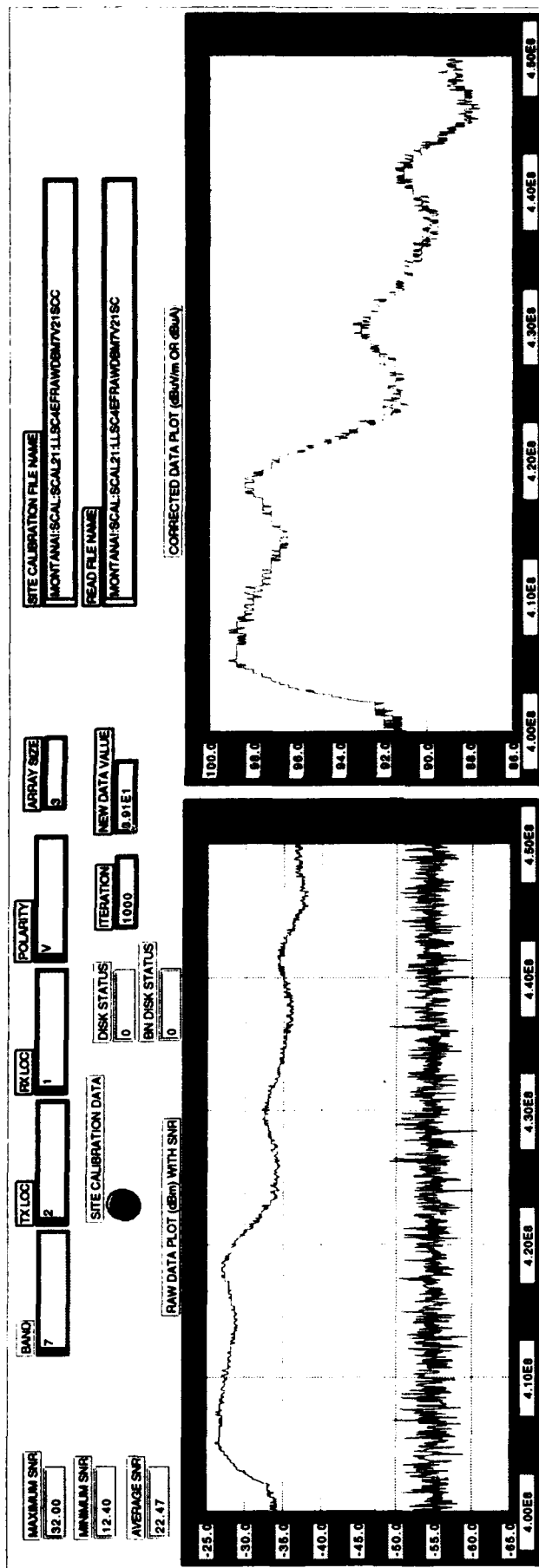


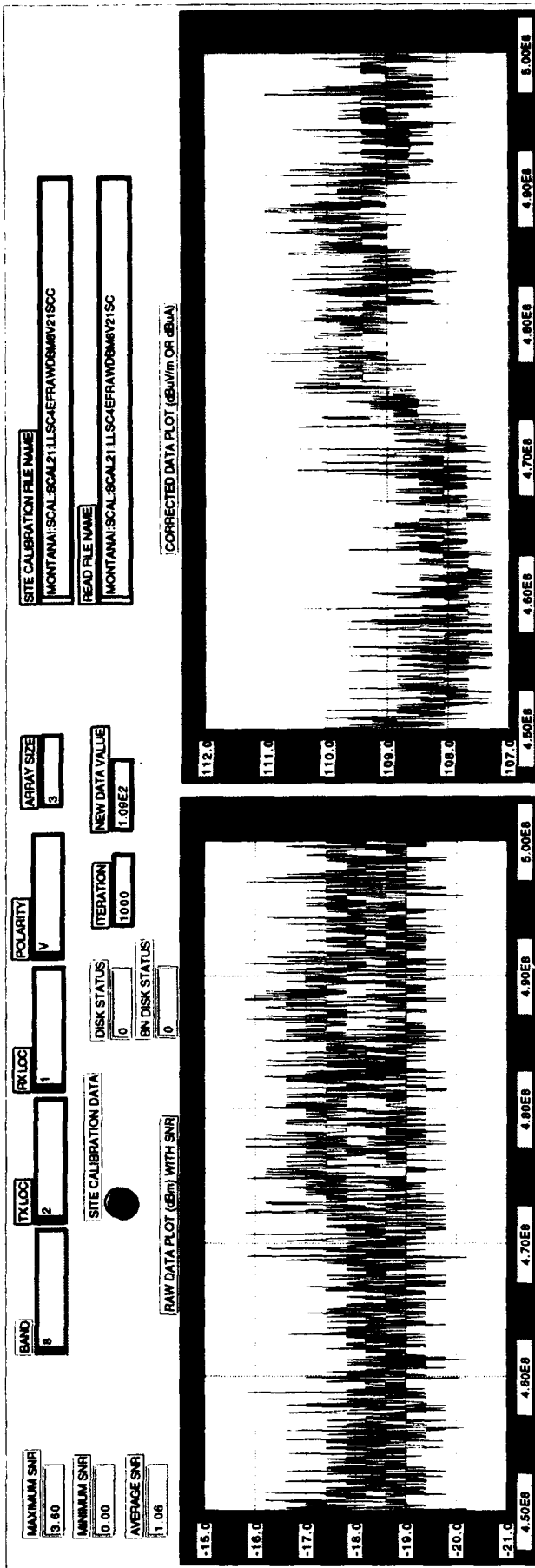
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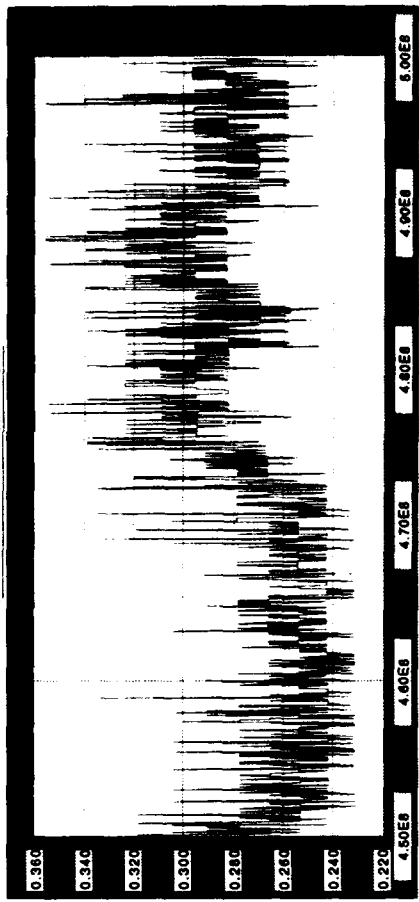


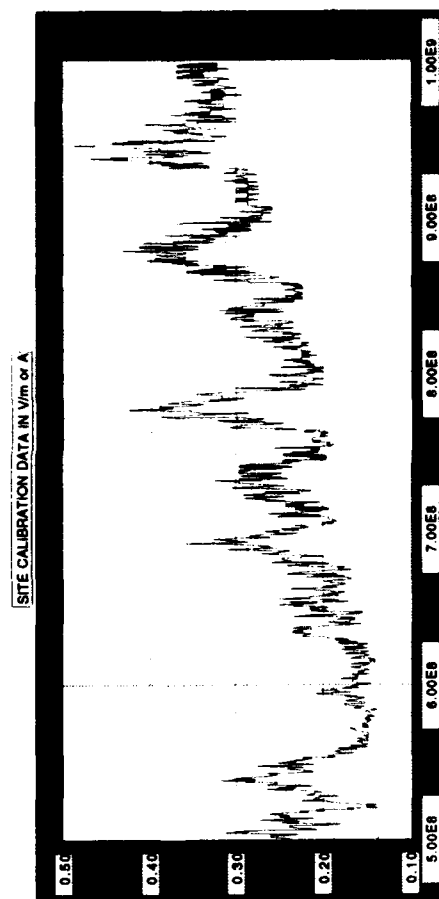
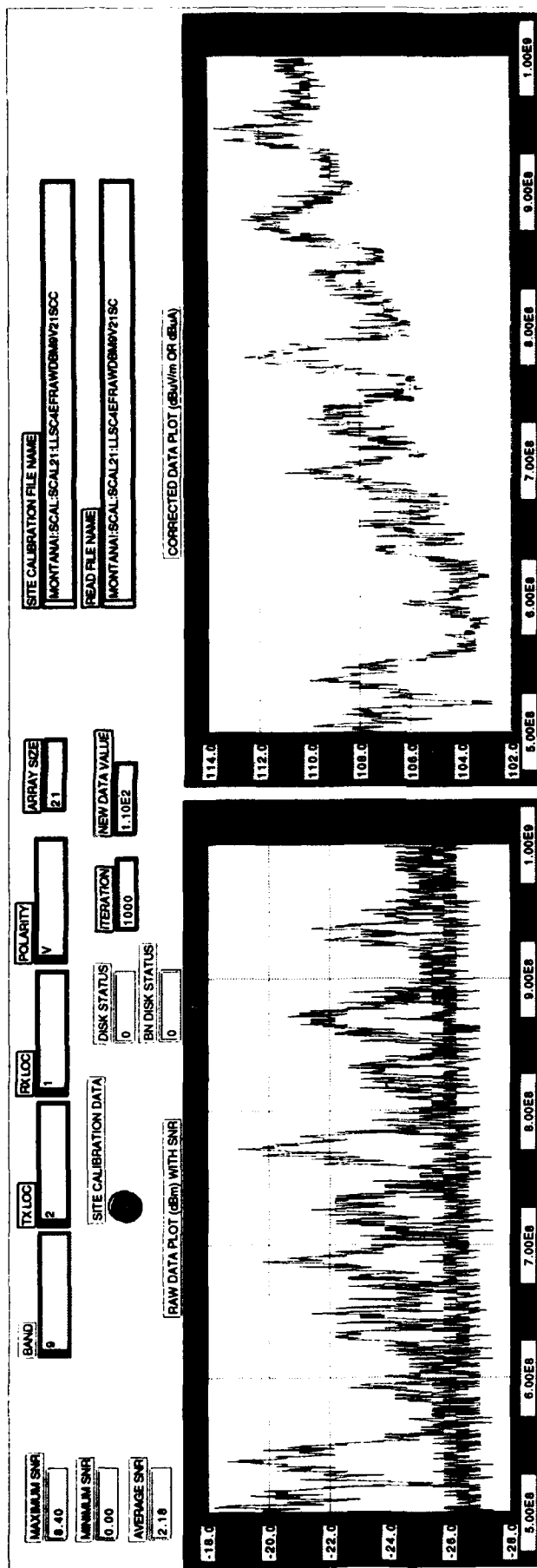


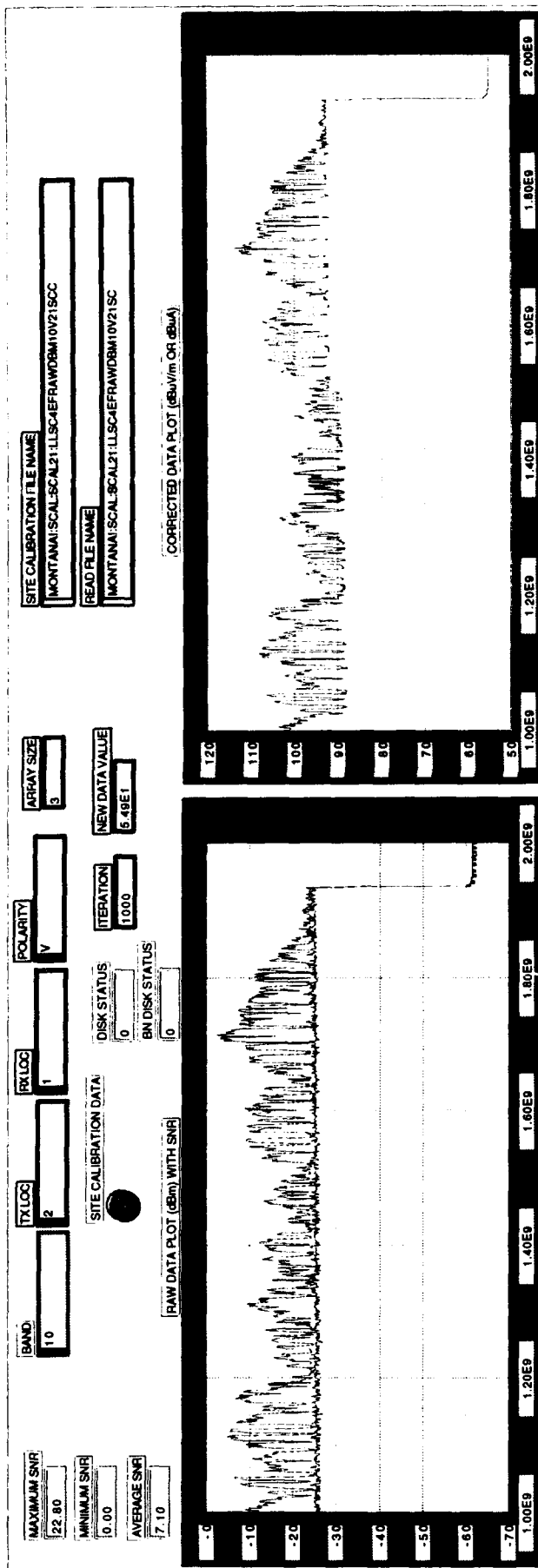




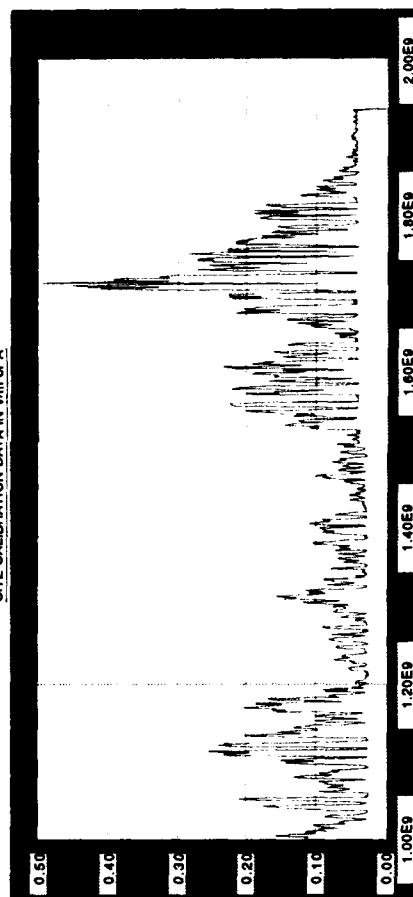
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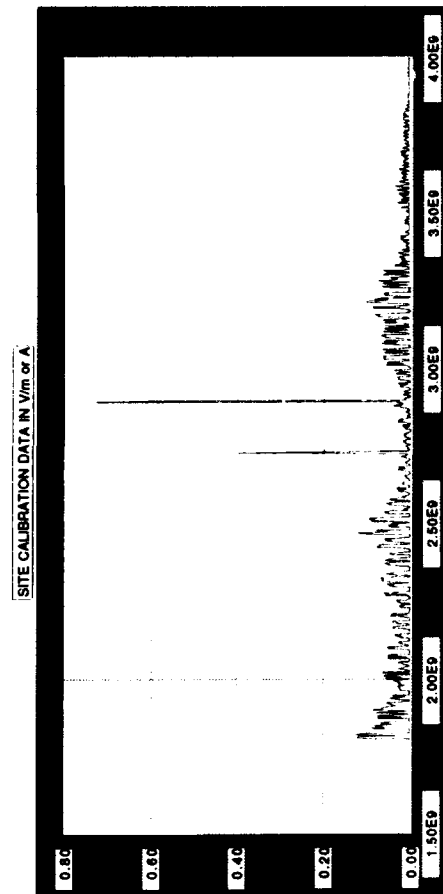
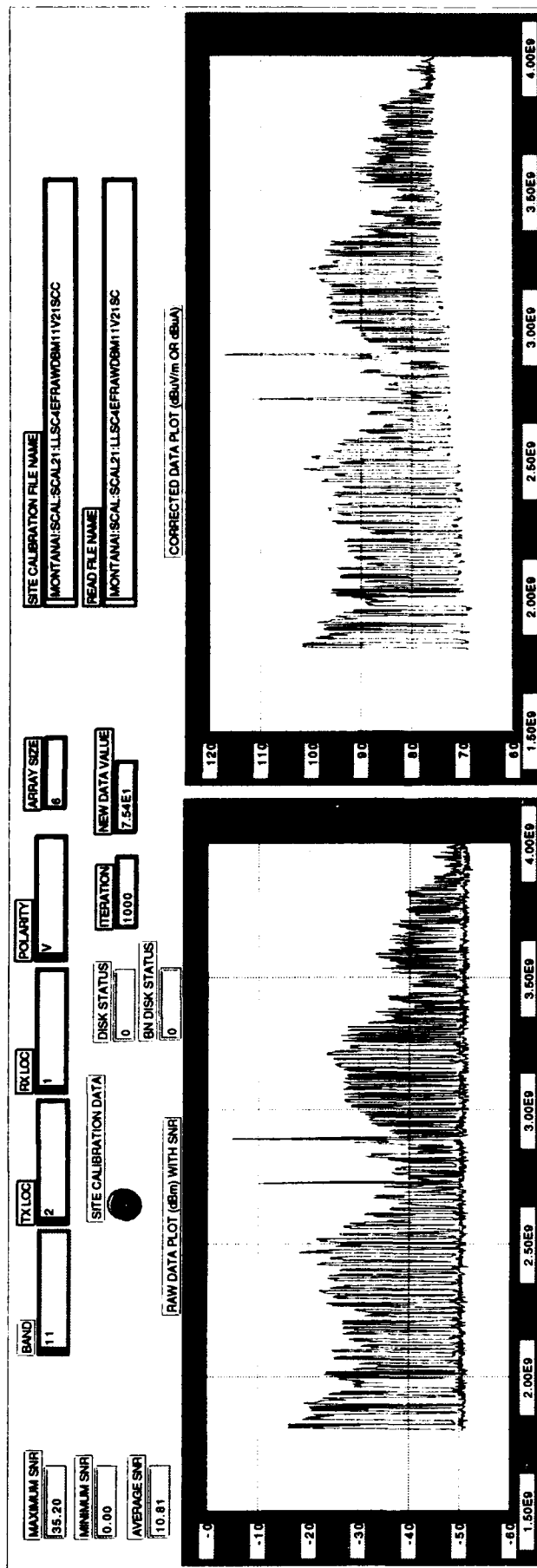


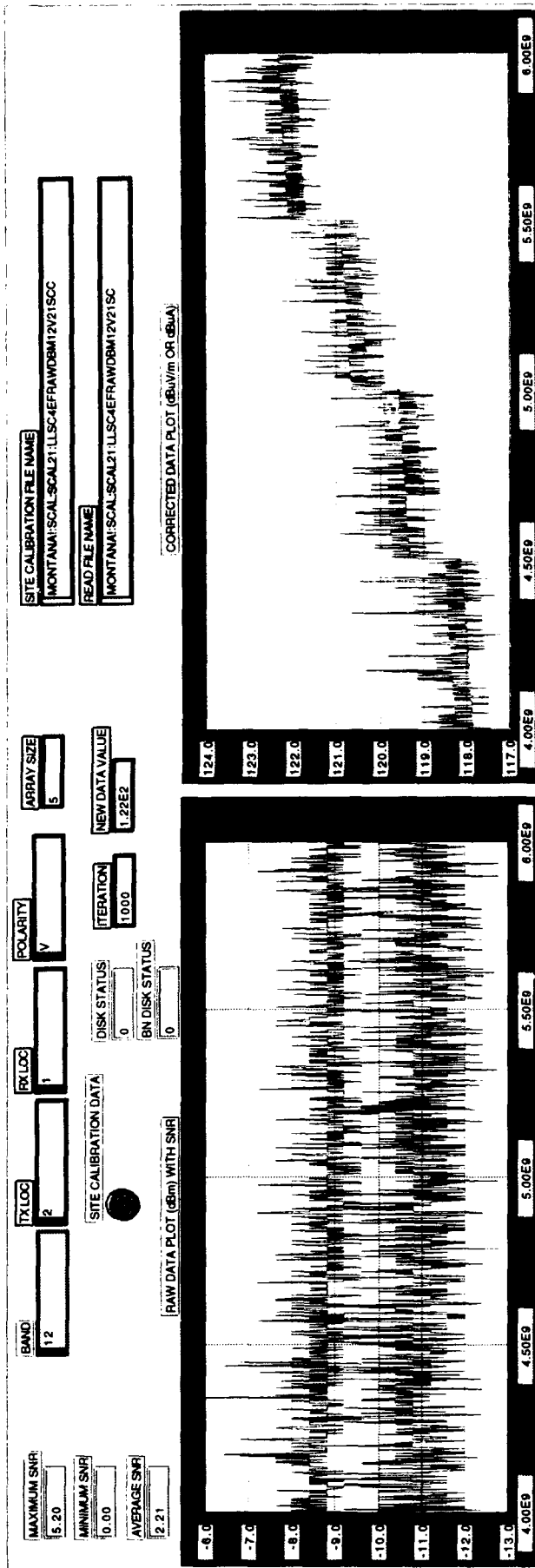




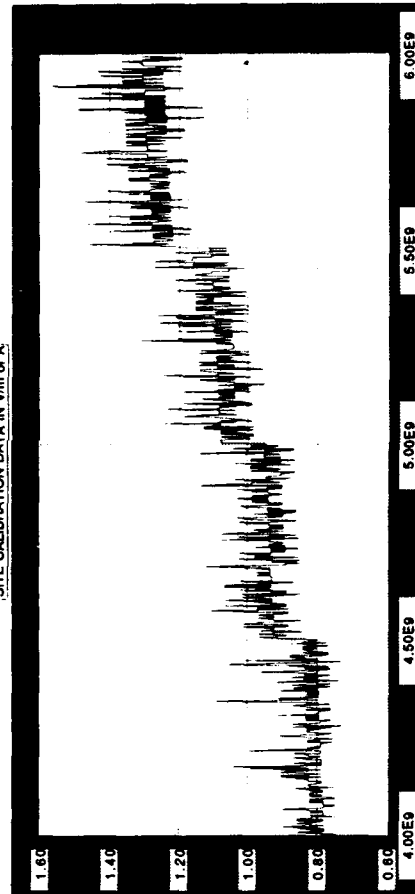
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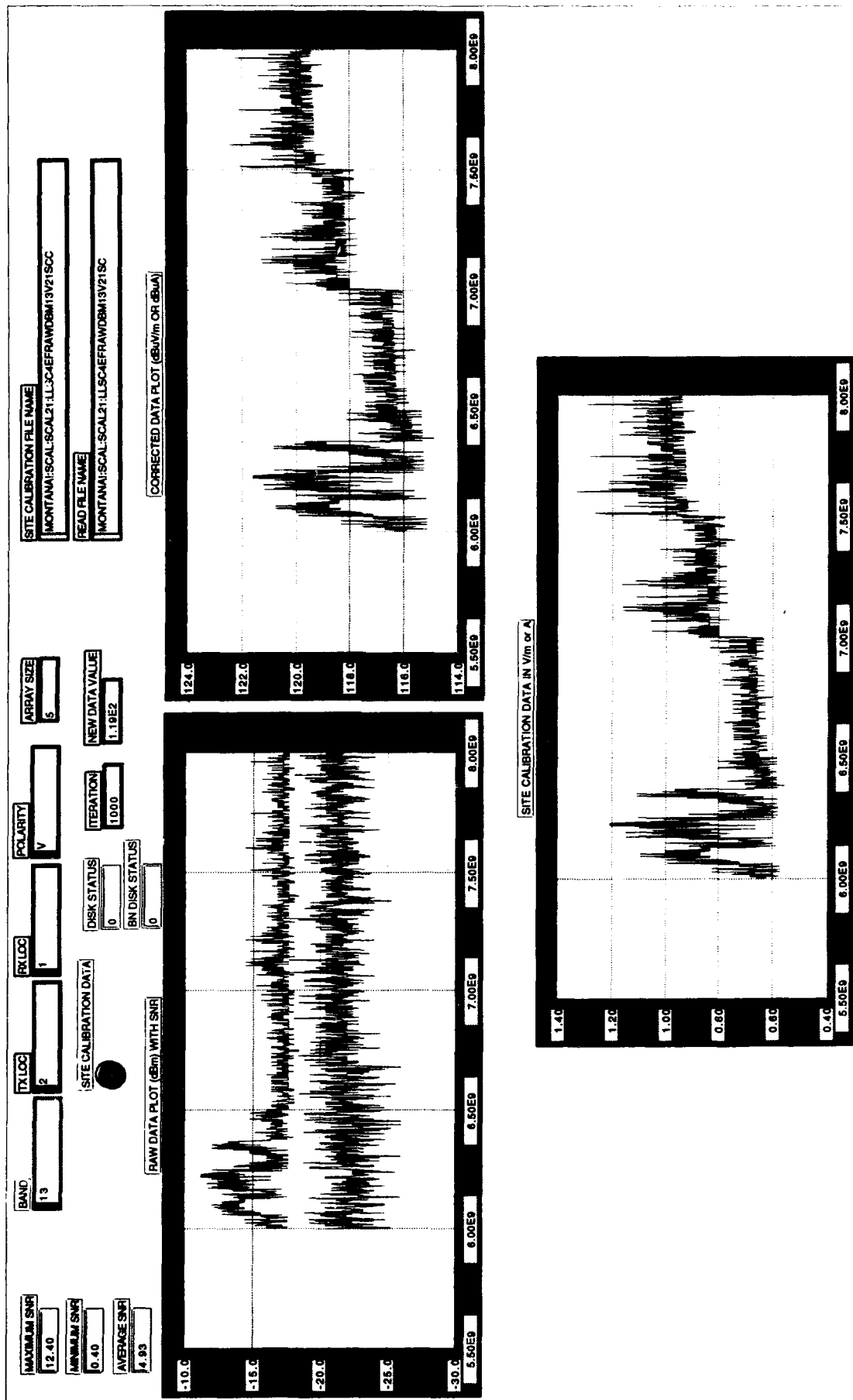


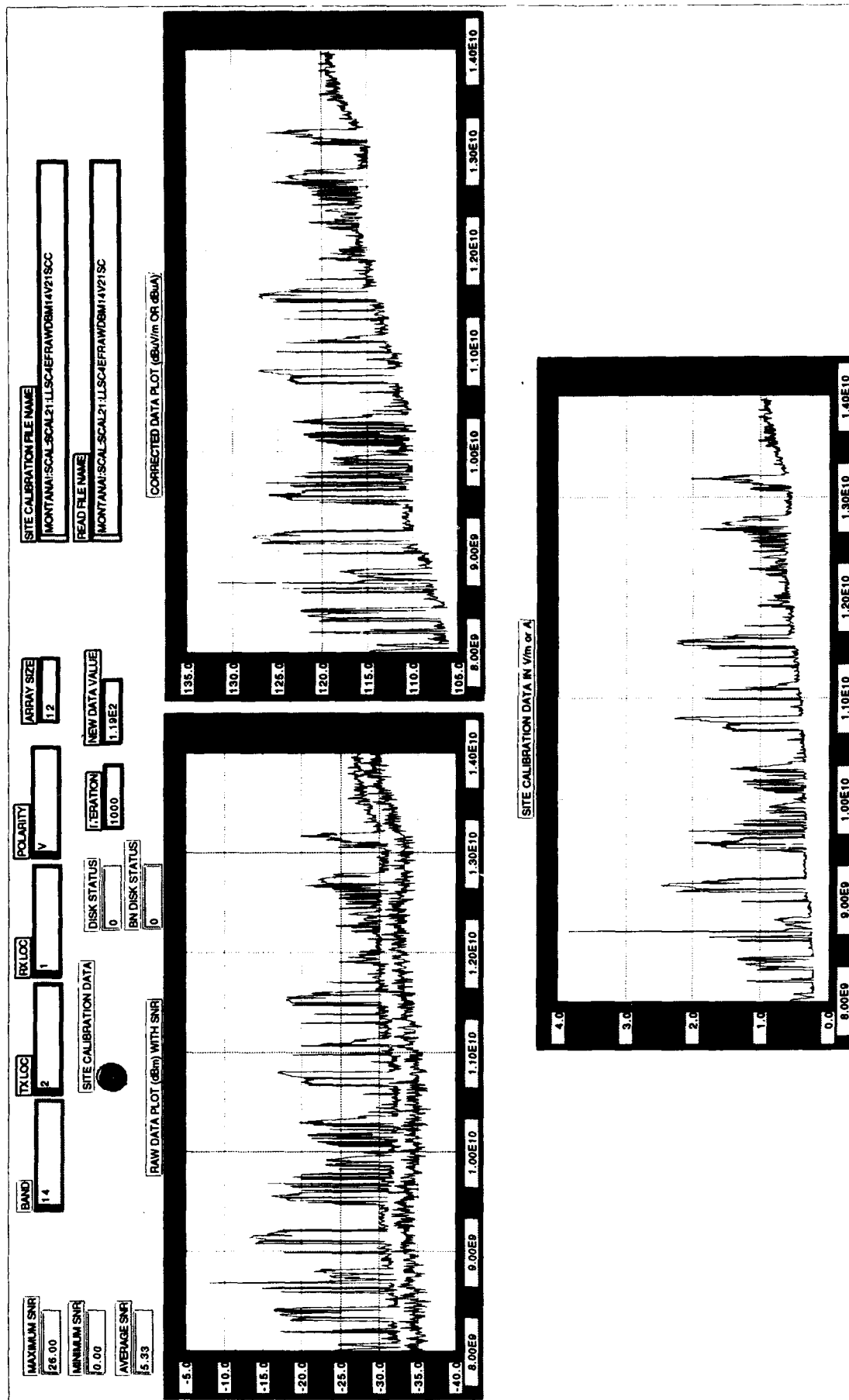


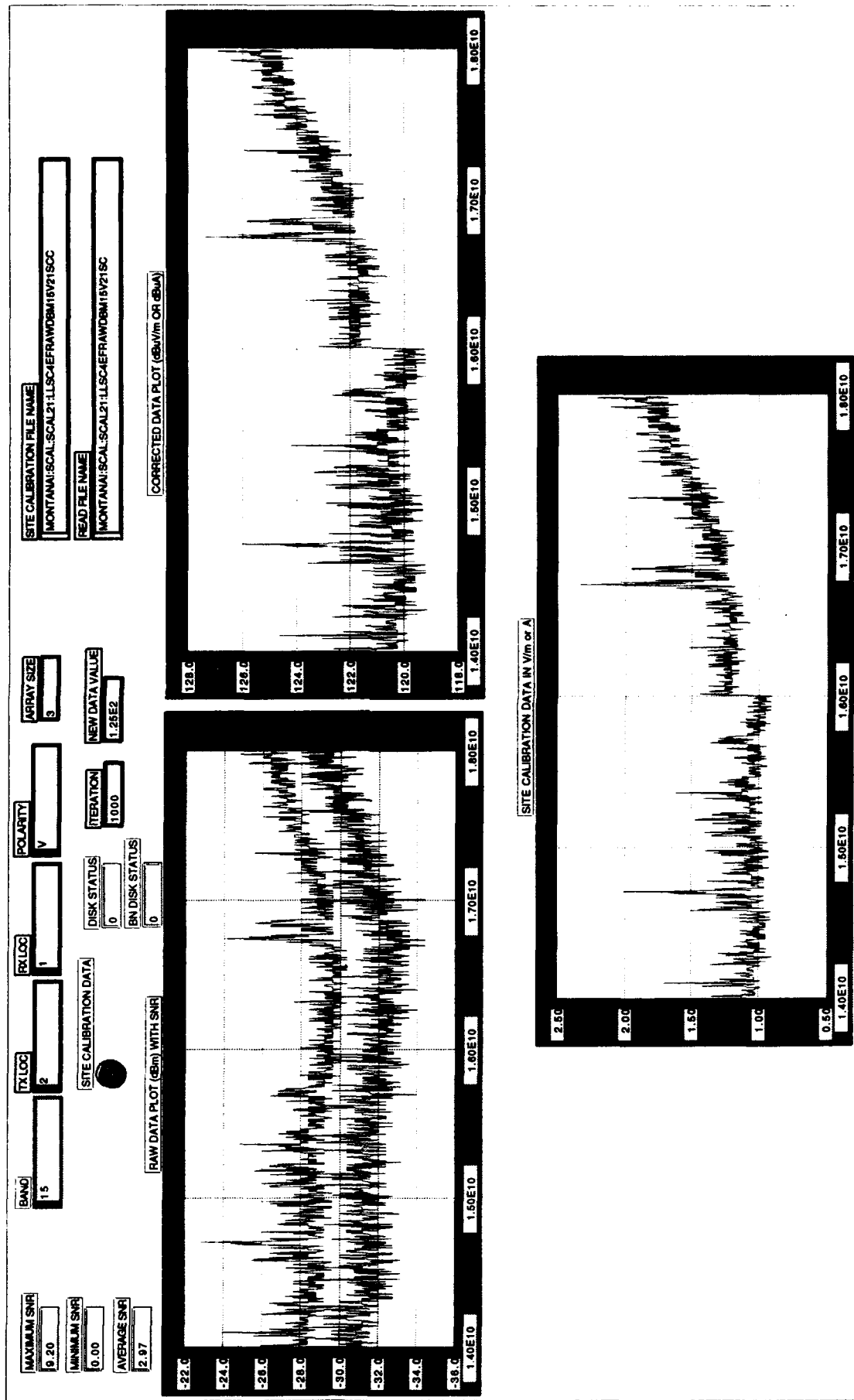


SITE CALIBRATION DATA IN V/m or A









SECTION 2

LLSC DATA PLOT DESCRIPTION

The LLSC data plots (sample on the following page) each contain the following information:

- Band number identification (Band)
 - S-76 orientation during the test (TXLOC)
 - Receive configuration location (RXLOC)
 - Transmit Antennae Polarity (POLARITY)
 - Full threat data array size (ARRAY SIZE - used internally by software application to process the data)
 - Name of the corrected SCAL data file
 - Data type indicator (if white indicates plot is LLSC data)
 - SCAL data type indicator (if black indicated plot is SCAL data)
 - Disk read error indicator (DISK STATUS)
 - Single corrected data value (NEW DATA VALUE - used internally by software application to process data)
 - Original uncorrected LLSC data file name (READ FILE NAME)
 - Original LLSC Data Plot in dBm with background noise overlay (RAW DATA PLOT (dBm) WITH SNR)
 - Corrected data plot in dBuA (CORRECTED DATA PLOT dBuV/m OR dBuA)
 - SCAL corrected data plot with values in dBuV/m (SITE CALIBRATION CORRECTED (dBuV))
 - LLSC data plot extrapolated to full threat (FULL THREAT DATA PLOT (V/m) OR CABLE CURRENT (A) WITH FULL THREAT OVERLAY)
-

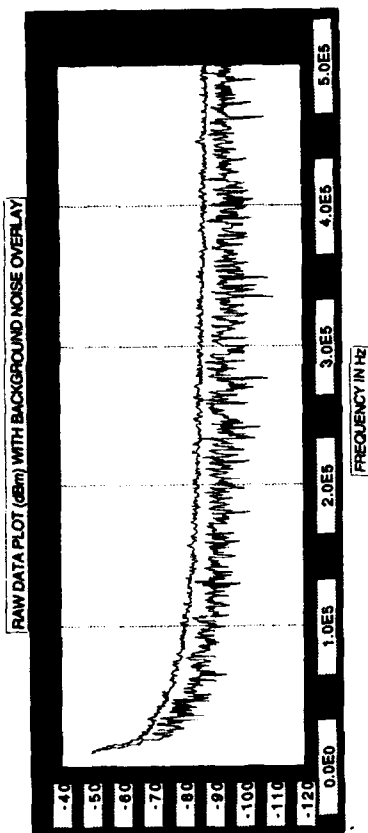
SECTION 2-1
PILOT DISPLAY UNIT LLSC DATA PLOTS

SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL11LLSC4FRWDBM1H11SC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC1CCRAWDBM1H11

SAND 1 TX LOC 1 RX LOC 1 POLARITY H

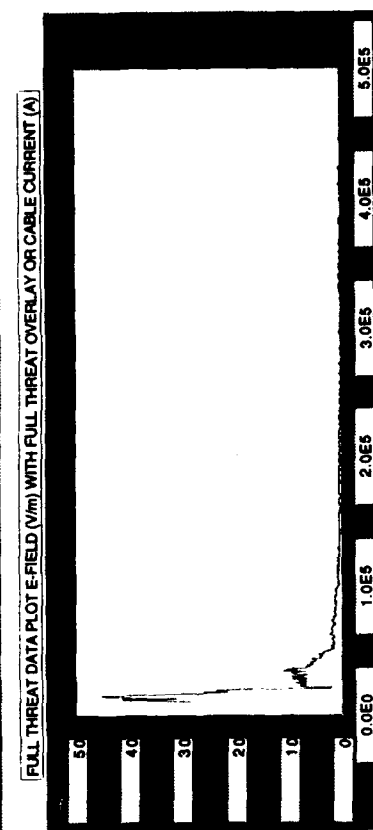
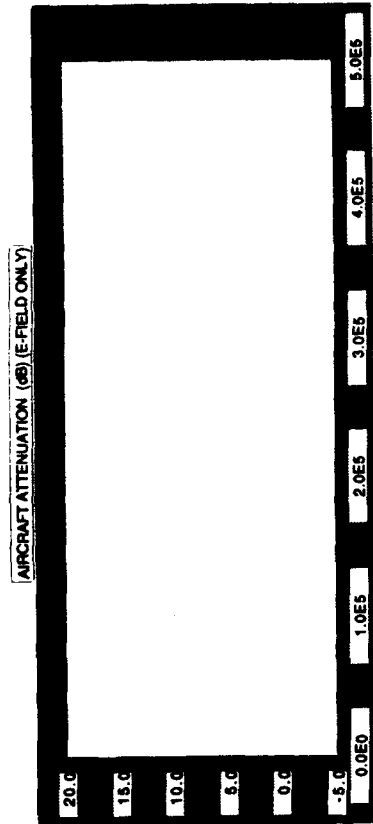
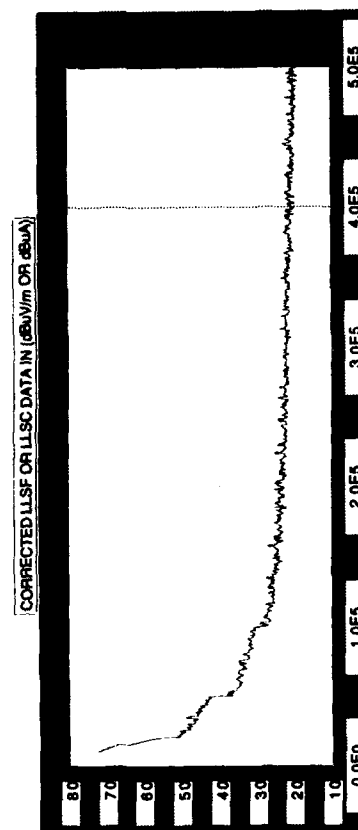
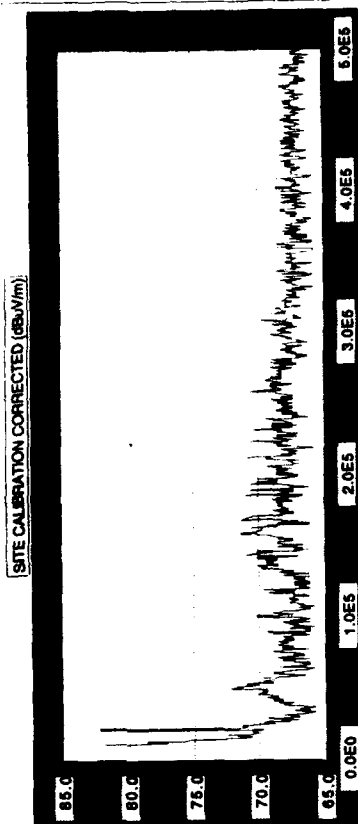
E-FIELD ☒ FILTER ON/OFF ☒ FILTER RANK 0 DISK STATUS 0



MAX ATTENUATION (dB) 0

MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0



BAND

E-FIELD ☒

MAX ATTENUATION (dB)

MIN ATTENUATION (dB)

AVERAGE ATTENUATION (dB)

TX LOC

FILTER ON/OFF ☒

PX LOC

FILTER BANK

POLARITY

DISK STATUS

SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL111LSC:FRANDBM2H1180C

READ FILE NAME
MONTANA:LABVIEW DATA\LSC10CRAWDBM2H11

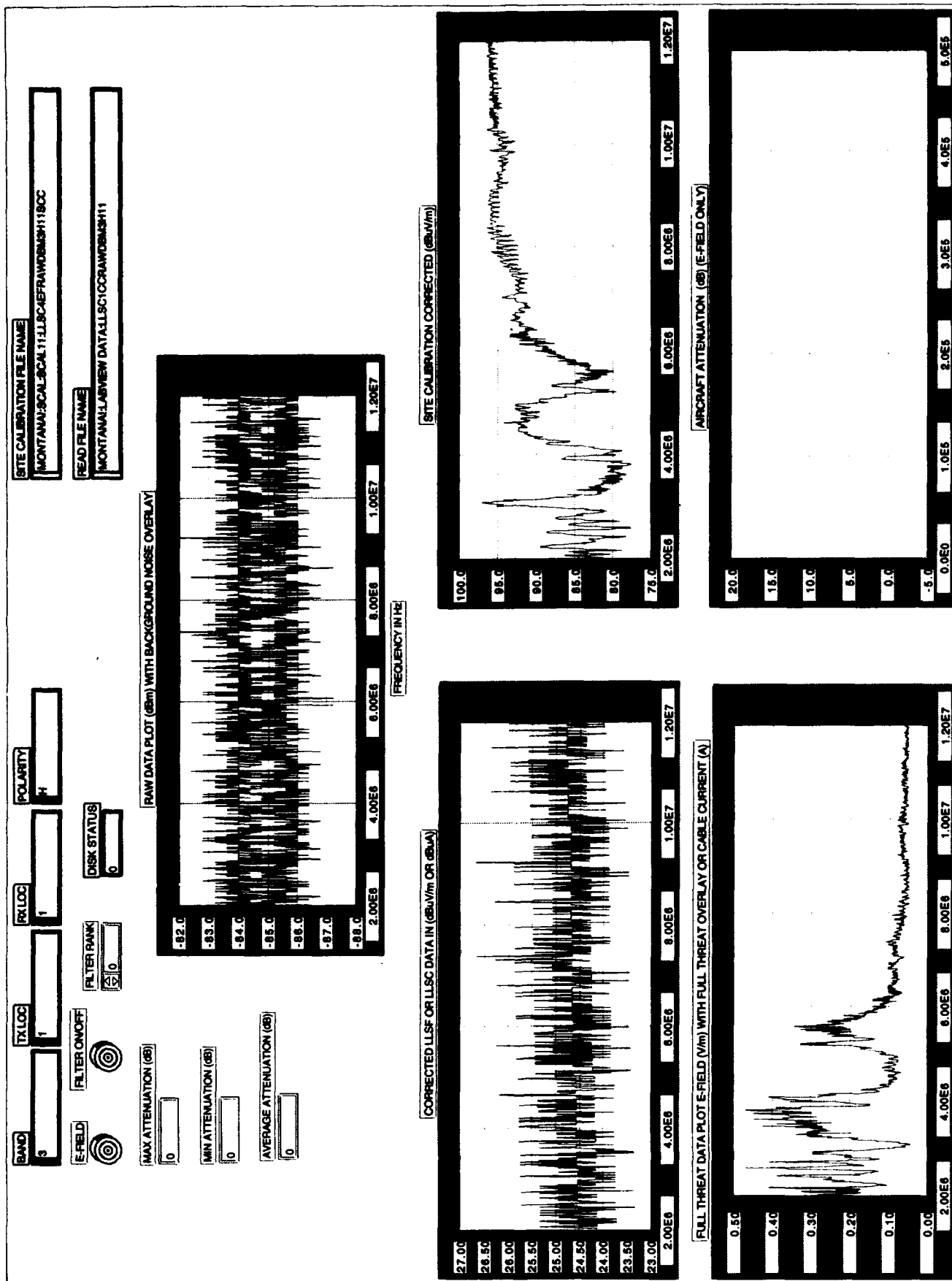
RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

(FREQUENCY IN Hz)

CORRECTED ILSF OR ILSC DATA IN (dBuV/m OR dBuA)

SITE CALIBRATION CORRECTED (dBuV/m)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL11LLSC4EPRAWD8M4H118CC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC10CRAWD8M4H11

BAND 4 TX LOC 1 RX LOC 1 POLARITY H

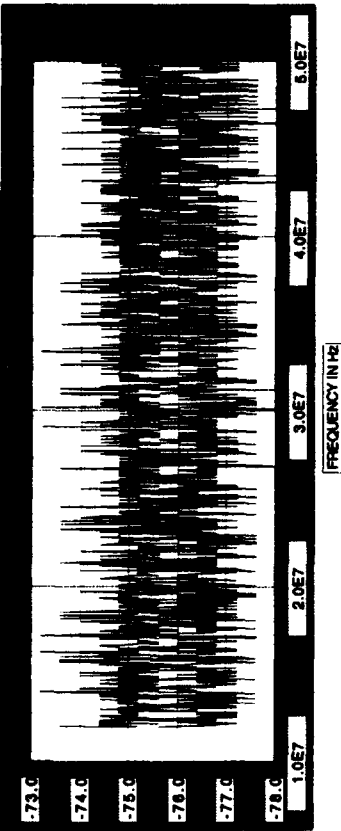
E-FIELD FILTER ON/OFF FILTER RANK 20 DISK STATUS 0

MAX ATTENUATION (dB) 0

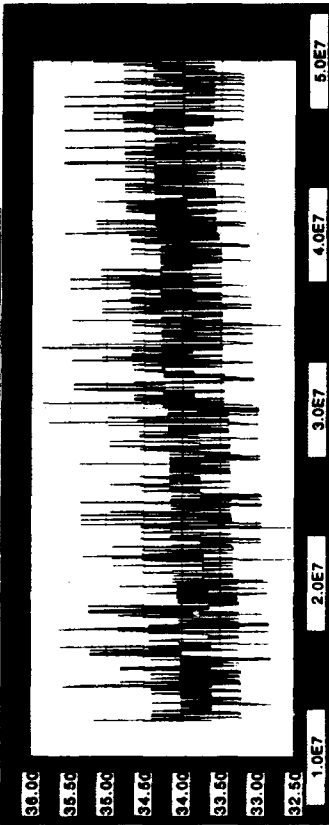
MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0

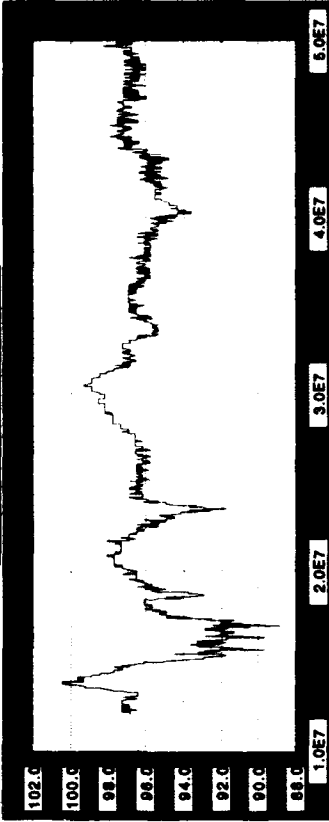
RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY



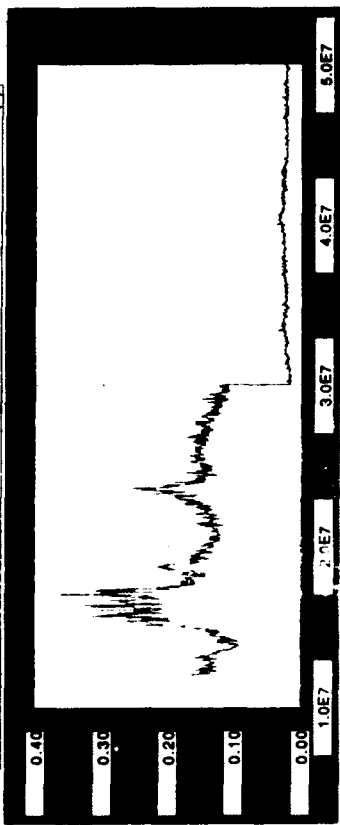
CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)



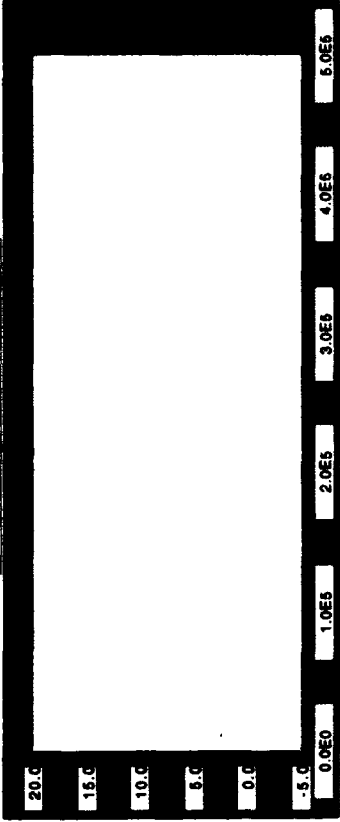
SITE CALIBRATION CORRECTED (dBuV/m)



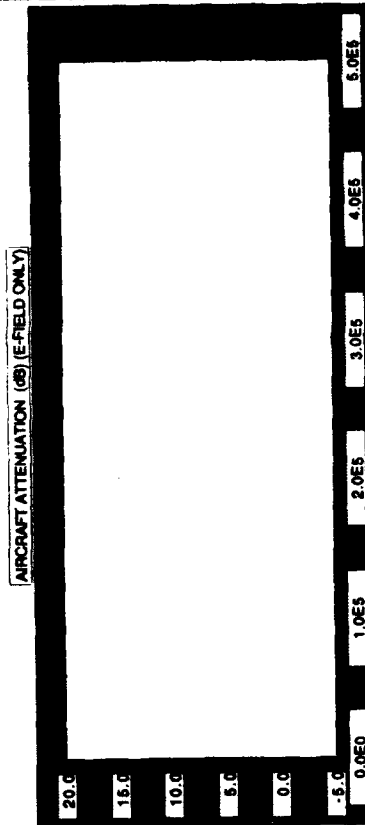
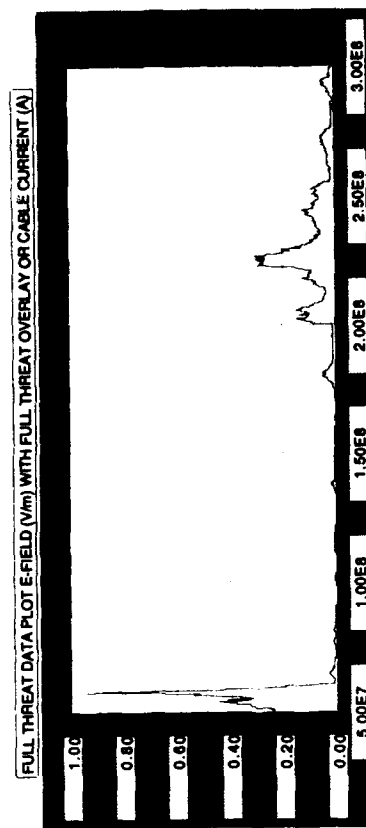
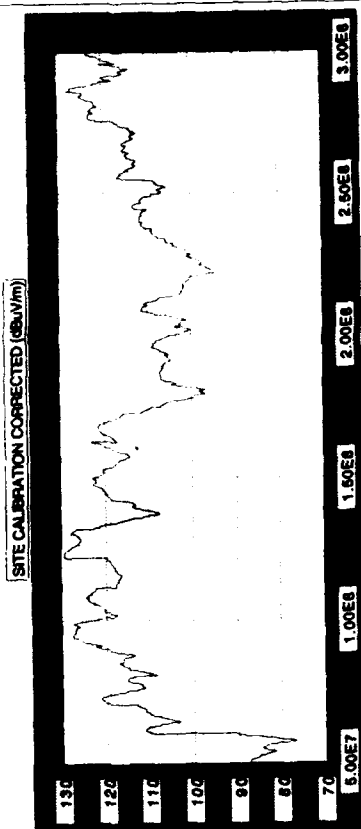
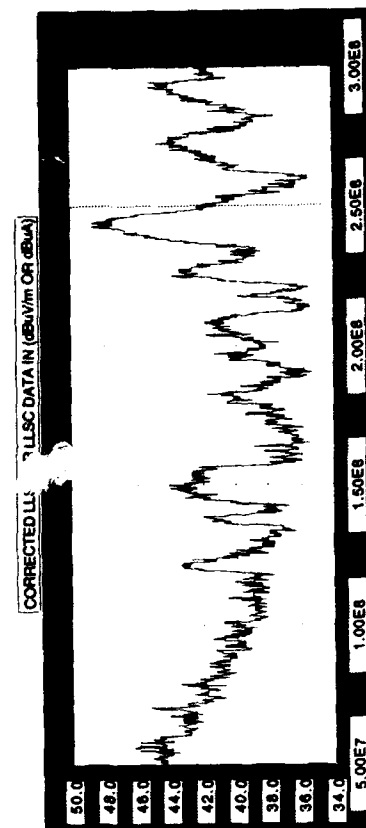
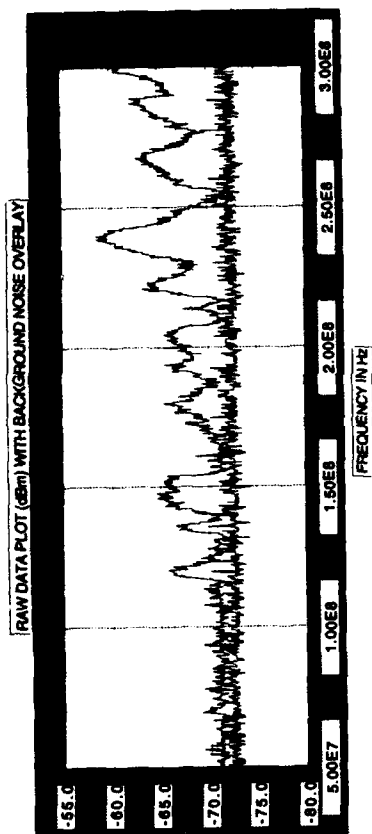
FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



BAND TX LOC RX LOC POLARITY
 E-FIELD FILTER ON/OFF FILTER RANK DISK STATUS



BAND

TX LOC

RX LOC

POLARITY

6

1

1

H

E-FIELD

FILTER ON/OFF

FILTER RANK

DISK STATUS

5/0

0

SITE CALIBRATION FILE NAME

READ FILE NAME

MONTANA-SCAL-SCAL11LLSC4EPRANDMMH1180C

MONTANA-LABVIEW DATA-LLSC10CRANDMMH11

MAX ATTENUATION (dB)

MIN ATTENUATION (dB)

AVERAGE ATTENUATION (dB)

0

0

0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

FREQUENCY IN HZ

CORRECTED LLSF OR LLSC DATA IN (dBuV/m OR dBuV)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

SITE CALIBRATION CORRECTED (dBuV/m)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

SAND

7

TXLOC

1

RXLOC

2

POLARITY

H

E-FIELD

FILTER ON/OFF

FILTER RANK

0

DISK STATUS

0

SITE CALIBRATION FILE NAME

MONTANA/SCAL/SCAL11/LLSC4E/RAW08M7H1190C

READ FILE NAME

MONTANA/LLASVIEW/DATA/LLSC10/RAW08M7H12

MAX ATTENUATION (dB)

0

MIN ATTENUATION (dB)

0

AVERAGE ATTENUATION (dB)

0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

-86.0

-88.0

-70.0

-72.0

-74.0

-76.0

-78.0

4.00E8

4.10E8

4.20E8

4.30E8

4.40E8

4.50E8

FREQUENCY IN Hz

CORRECTED LLSP OR LLSC DATA IN (dBuV/m OR dBuA)

40.0

38.0

36.0

34.0

32.0

30.0

4.00E8

4.10E8

4.20E8

4.30E8

4.40E8

4.50E8

SITE CALIBRATION CORRECTED (dBuV/m)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

6.0

5.0

4.0

3.0

2.0

1.0

0.0

4.00E8

4.10E8

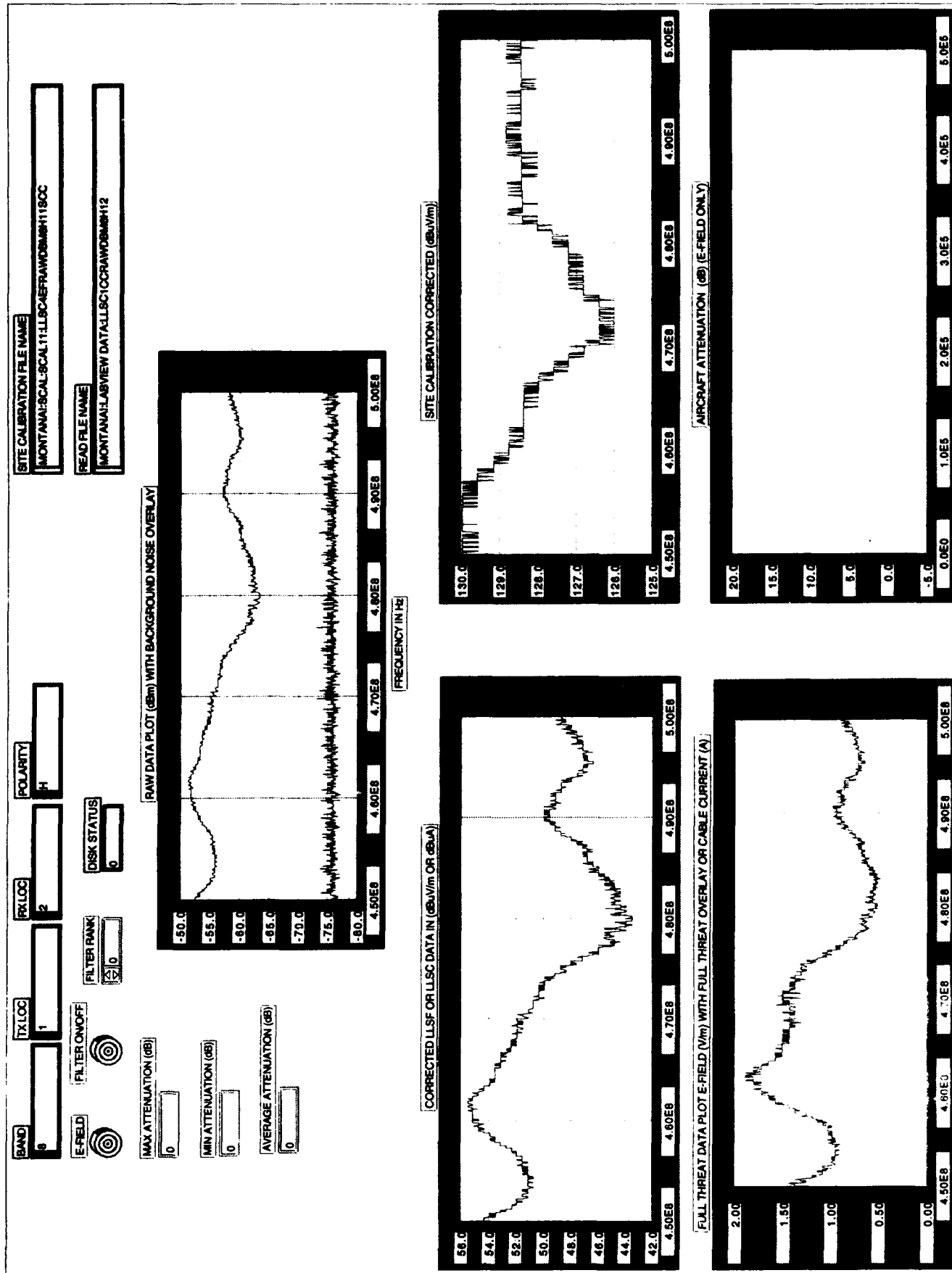
4.20E8

4.30E8

4.40E8

4.50E8

AIRCRAFT ATTENUATION (dB) [E-FIELD ONLY]

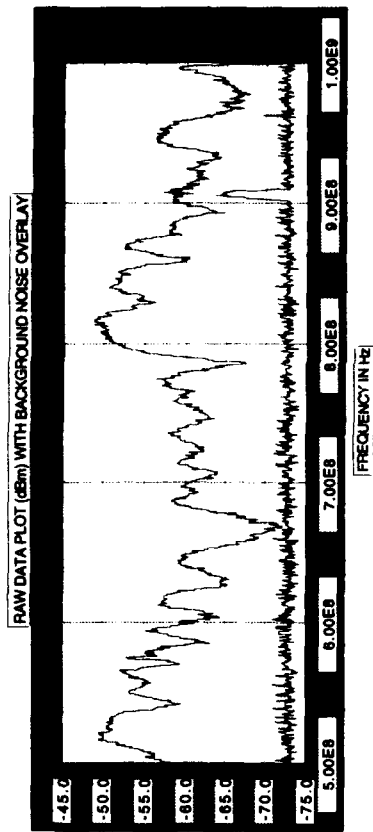


SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL11LLSC:EPRAWDBM9H11SOC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC:ICORAWDBM9H12

BAND 9 TX LOC 1 RX LOC 2 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 2/0 DISK STATUS 0

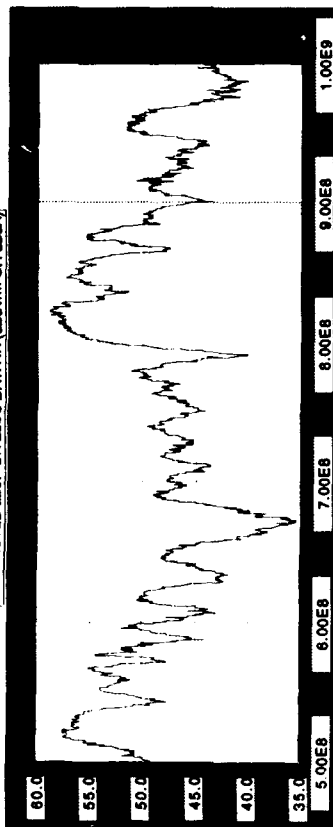


MAX ATTENUATION (dB) 0

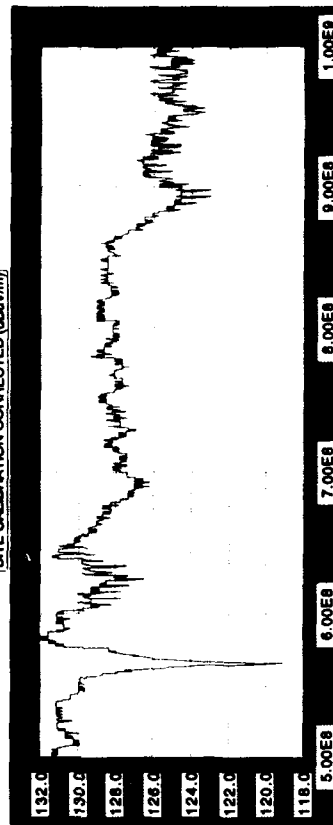
MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0

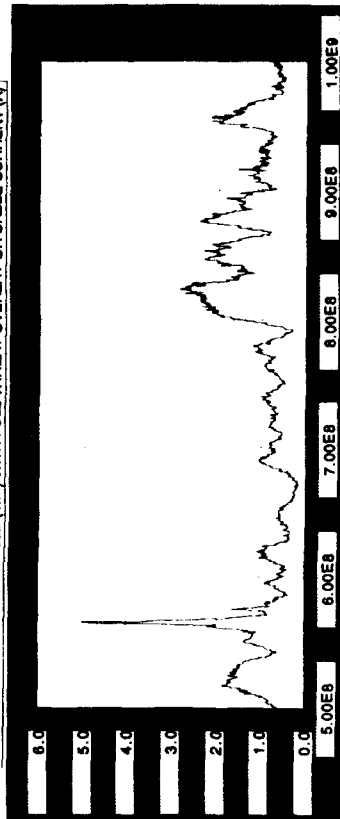
CORRECTED LLSP OR LLSC DATA IN (dBuV/m OR dBuA)



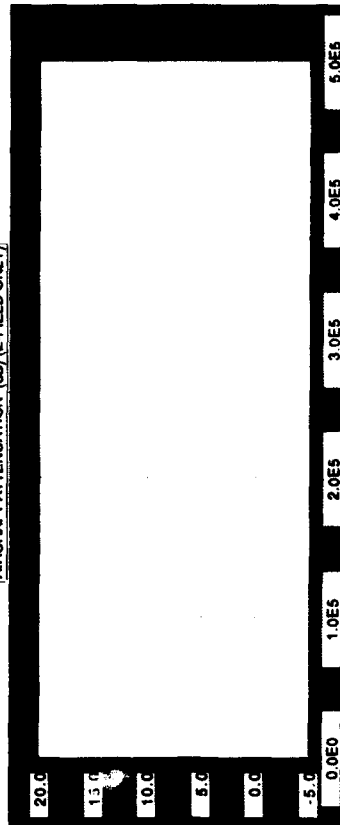
SITE CALIBRATION CORRECTED (dBuV/m)

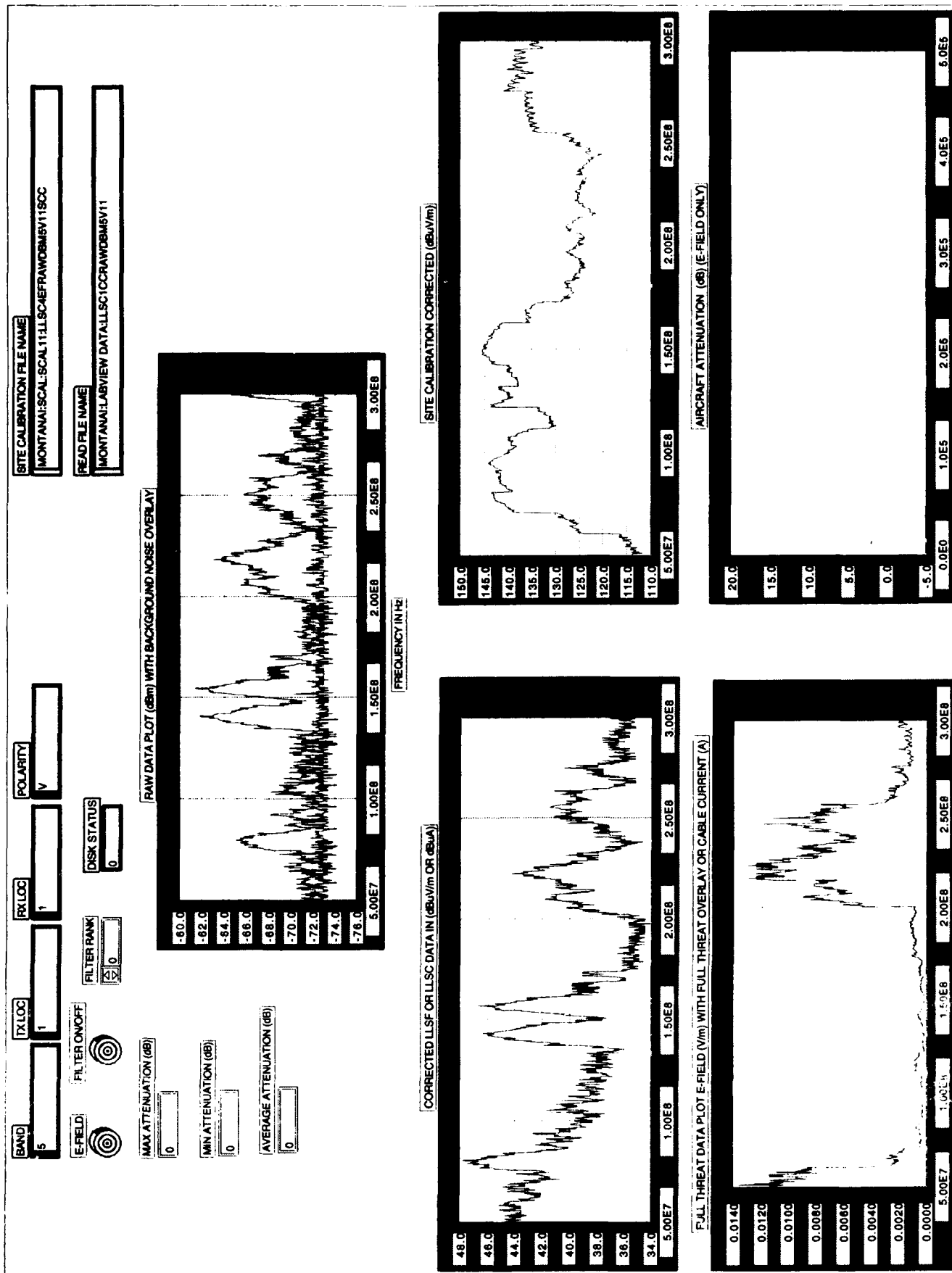


FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



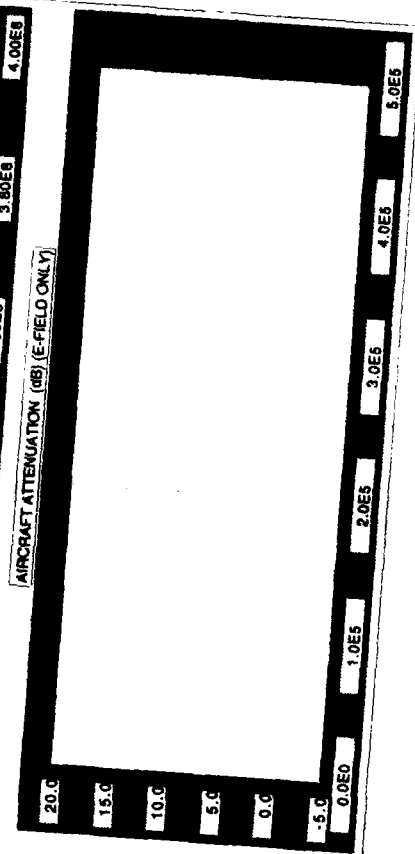
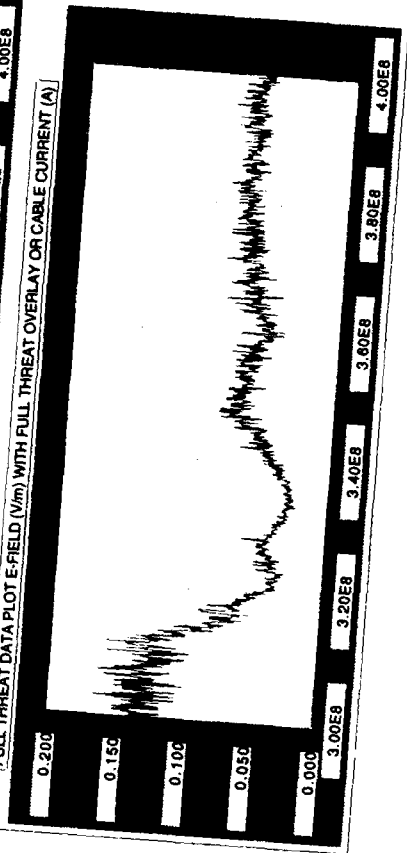
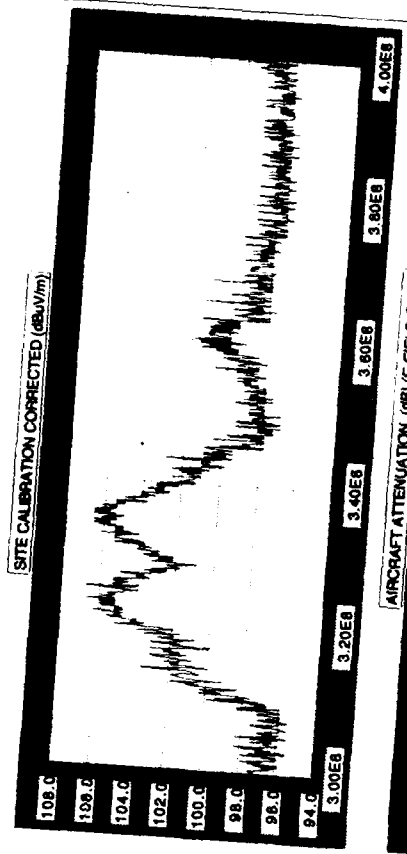
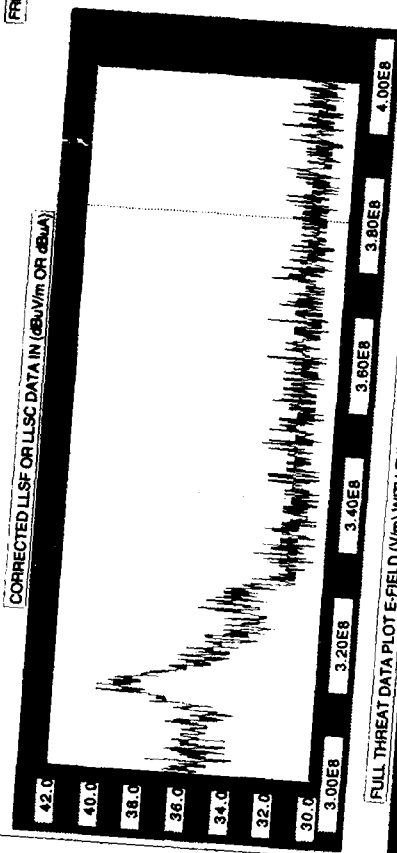
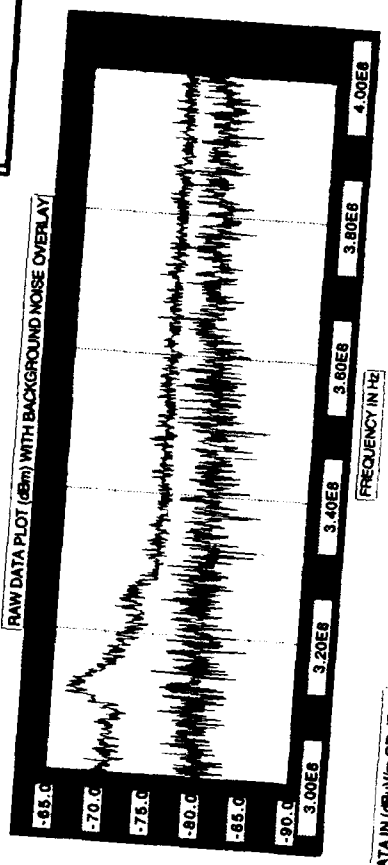
AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

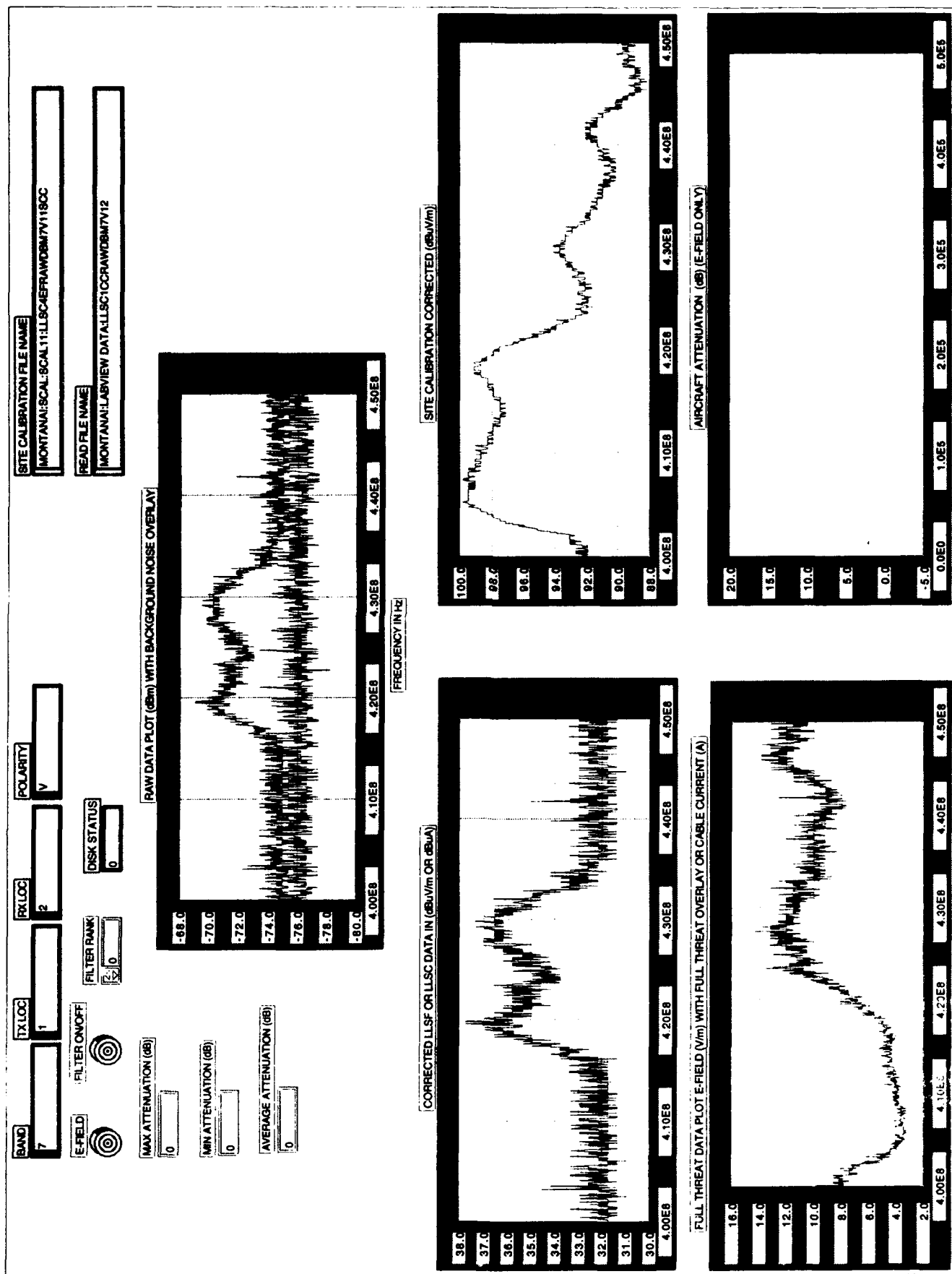




BAND TX LOC RX LOC POLARITY
 E-FIELD ☒ FILTER ON/OFF ☒ FILTER RANK DISK STATUS
 MAX ATTENUATION (dB) MIN ATTENUATION (dB) AVERAGE ATTENUATION (dB)

SITE CALIBRATION FILE NAME
 MONTANA11SCAL11LLSCAFRAWD8M8V11SCC
 READ FILE NAME
 MONTANA11ABVIEW DATA11SC1CCRAWDSM8V11



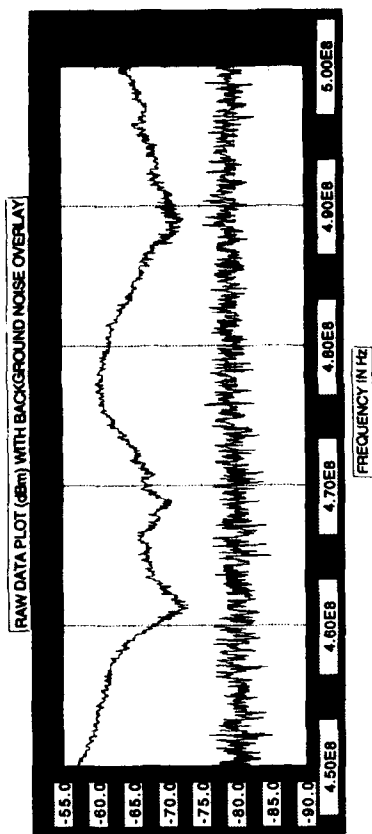


SITE CALIBRATION FILE NAME
MONTANA:SCAL11LLSCAFRAWD8MBV11SOC

READ FILE NAME
MONTANA:LABVIEW DATA\LLSC10CRAWDSMBV12

BAND 8 TXLOC 1 RXLOC 2 POLARITY V

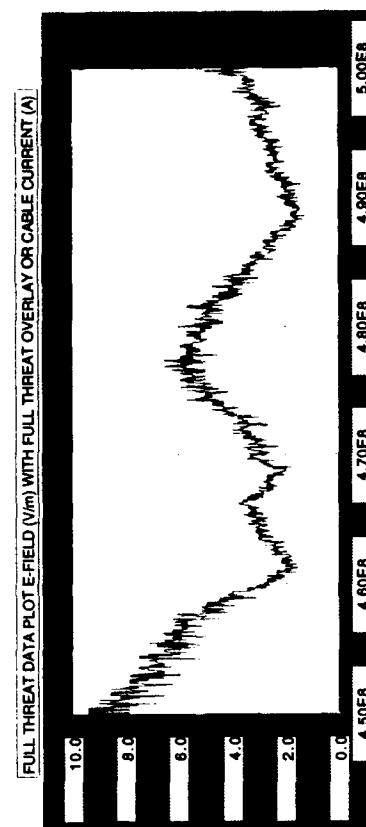
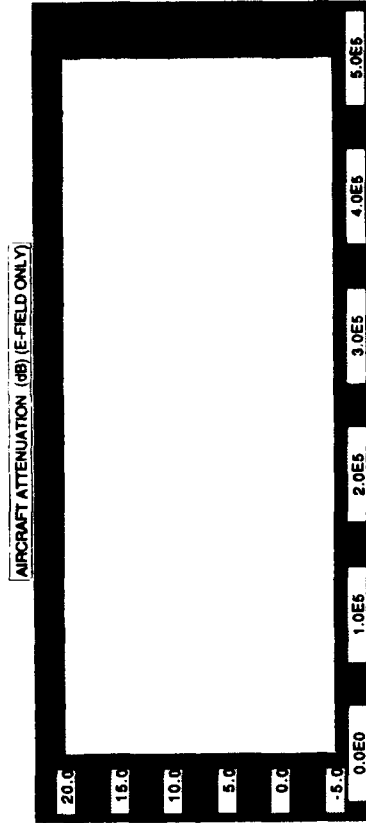
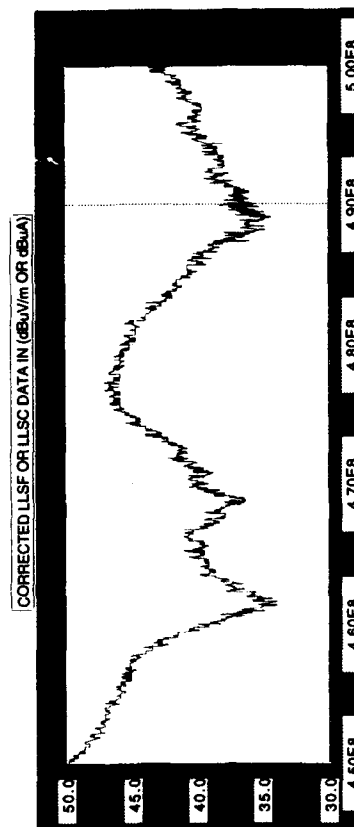
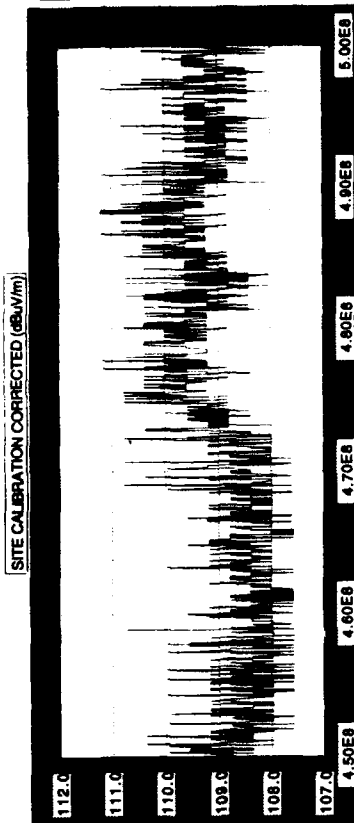
E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0

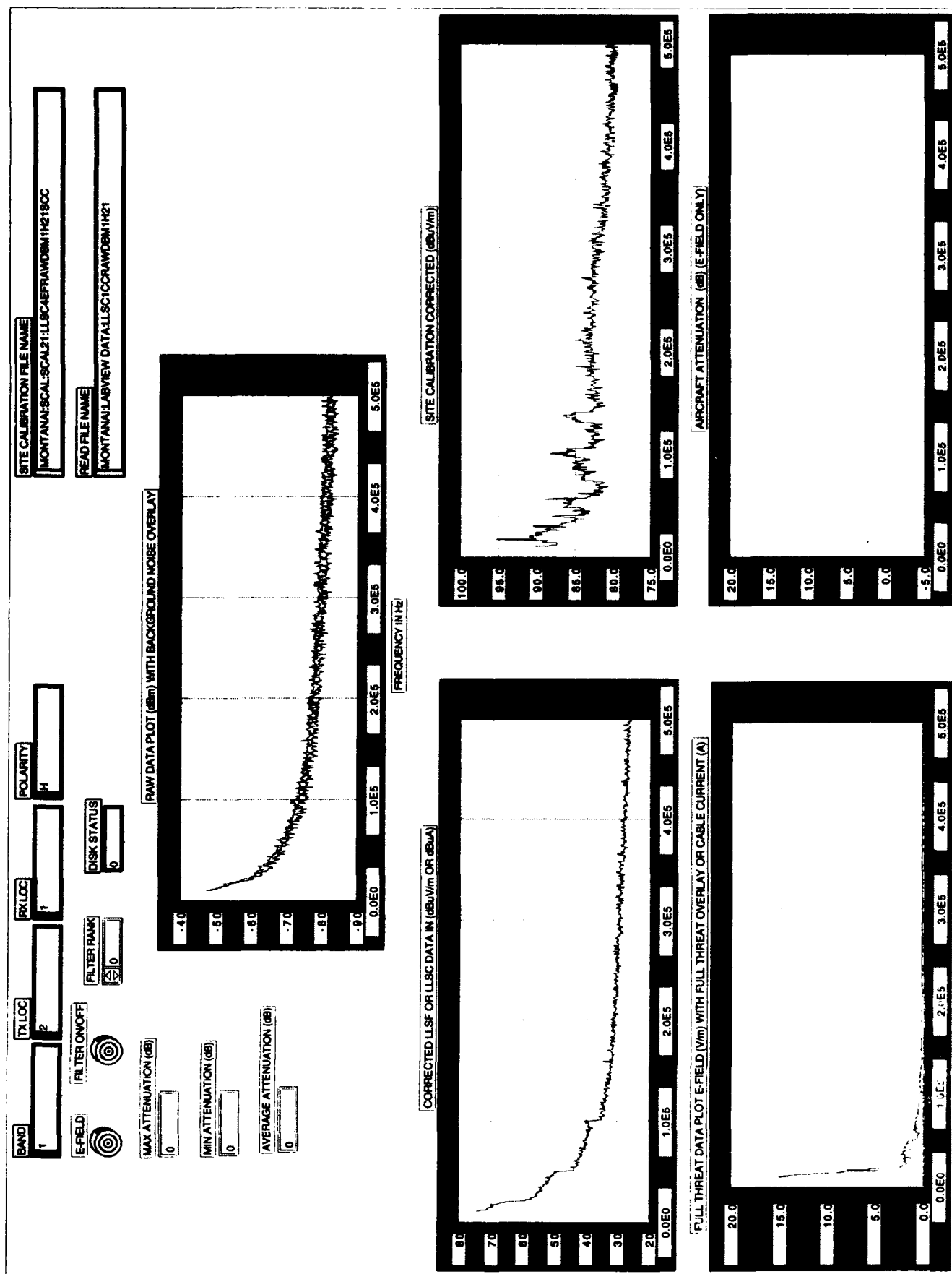


MAX ATTENUATION (dB) 10

MIN ATTENUATION (dB) 10

AVERAGE ATTENUATION (dB) 10





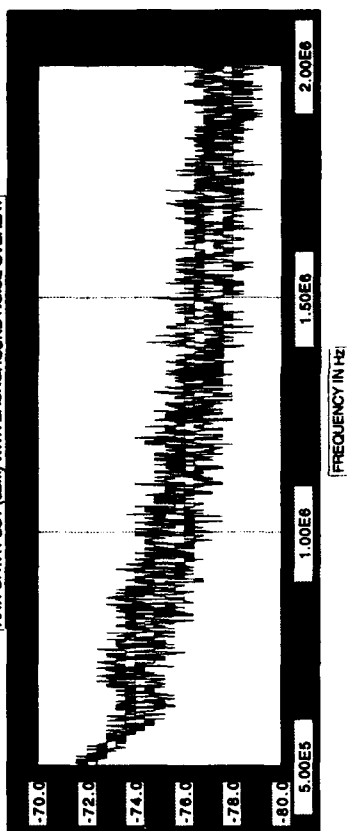
SITE CALIBRATION FILE NAME
MONTANA:SCAL3CAL21LLSCAFRAWDBM2H21SCC

READ FILE NAME
MONTANA:LABVIEW DATA\LLSC1CCRAWDBM2H21

BAND 2 TX LOC 2 RX LOC 1 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 2/0 DISK STATUS 0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

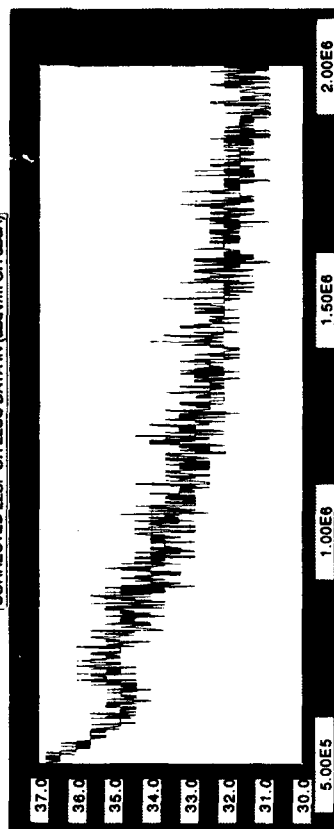


MAX ATTENUATION (dB) 0

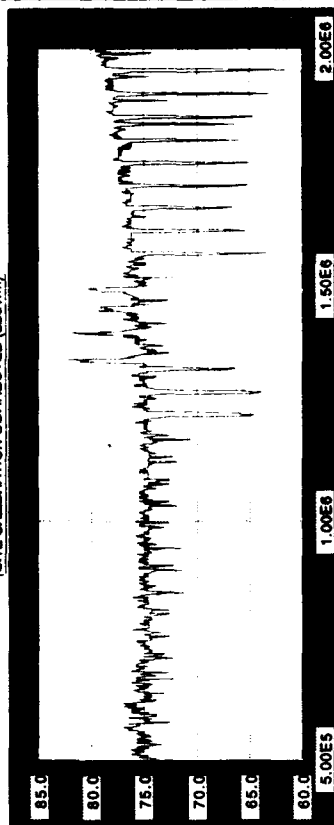
MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0

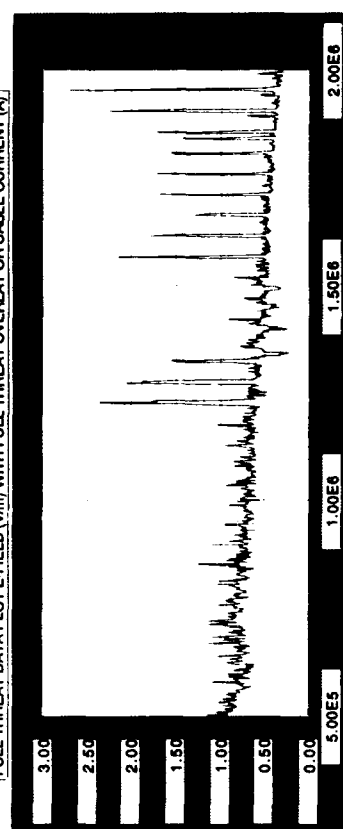
CORRECTED ILLSF OR LLSC DATA IN (dBuV/m OR dBuA)



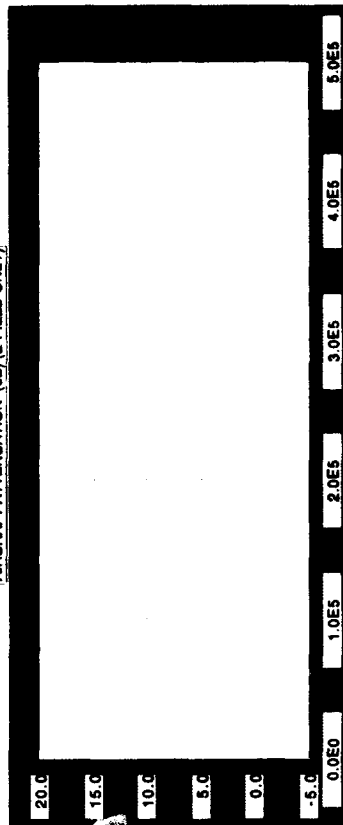
SITE CALIBRATION CORRECTED (dBuV/m)



FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



BAND 3	TALOC 2	FXLOC 1	POLARITY H
SITE CALIBRATION FILE NAME MONTANA:SCAL:SCAL11LSC4EFRAWDSN4218CC			
READ FILE NAME MONTANA:LABVIEW DATA11LSC10CRRAWDSN421			

E-FIELD	FILTER ON/OFF	FILTER BANK	DISK STATUS
		0	0

MAX ATTENUATION (dB)	MIN ATTENUATION (dB)	AVERAGE ATTENUATION (dB)
0	0	0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

FREQUENCY IN HZ

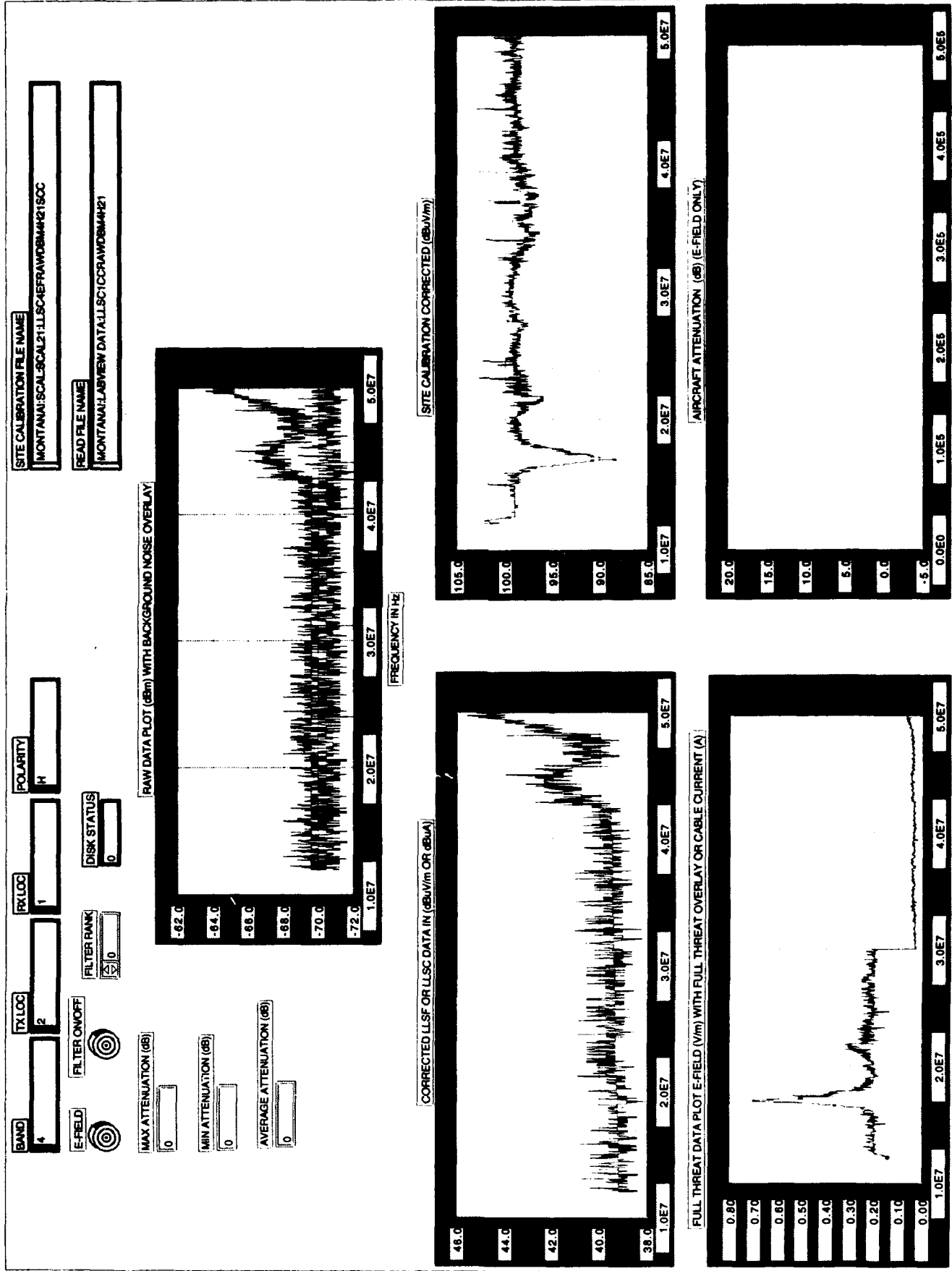
CORRECTED LLSE OR LLSC DATA IN (dBuV/m OR dBuA)

SITE CALIBRATION CORRECTED (dBuV/m)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

SITE CALIBRATION CORRECTED (dBuV/m)



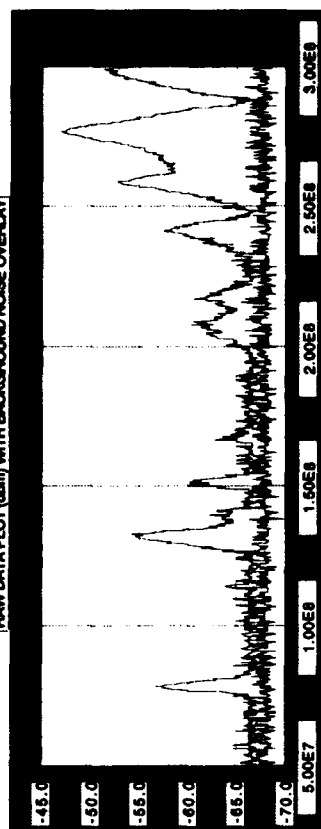
SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL:11:SC:EF:RAW:08:05:21:80C

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC:10:RAW:08:05:21

BAND 6 TX LOC 2 RX LOC 1 POLARITY H

E-FIELD ☒ FILTER ON/OFF ☒ FILTER RANK 0 DISK STATUS 0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY



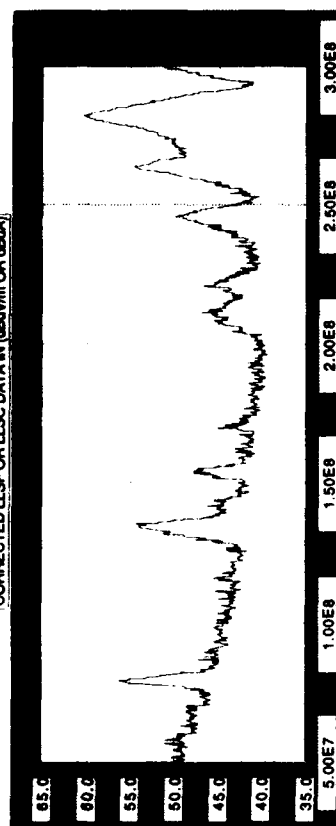
MAX ATTENUATION (dB)
0

MIN ATTENUATION (dB)
0

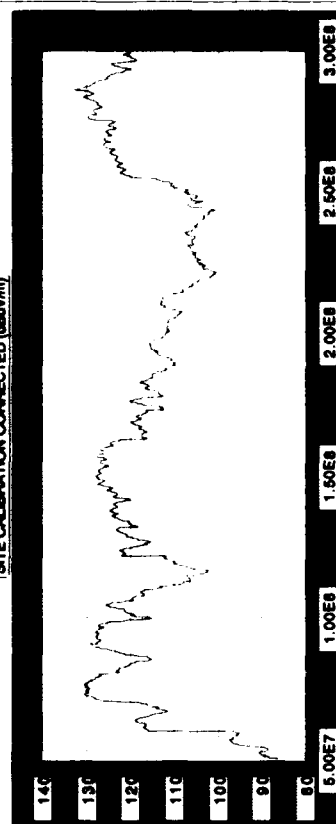
AVERAGE ATTENUATION (dB)
0

FREQUENCY IN HZ

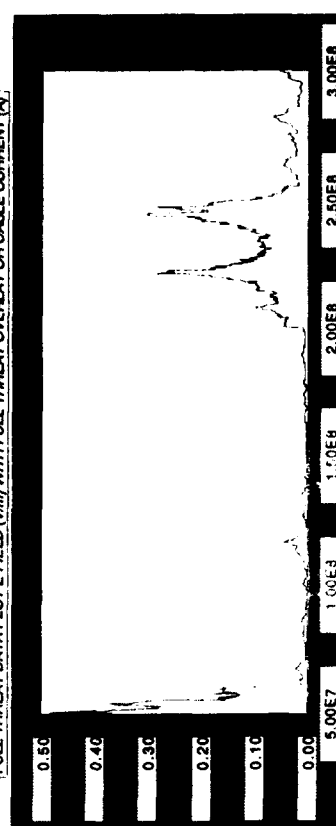
CORRECTED ILSF OR LLSC DATA IN (dBuV/m OR dBuA)



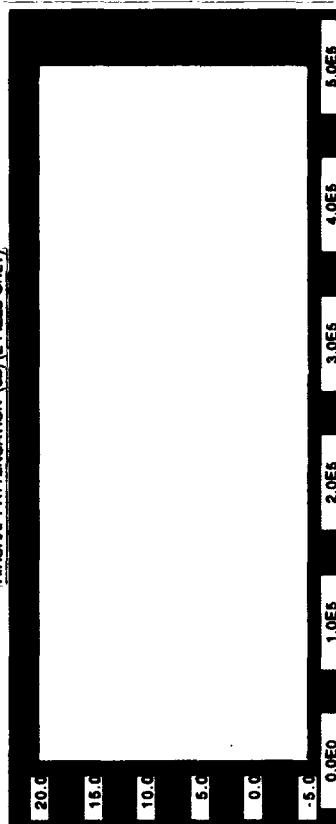
SITE CALIBRATION CORRECTED (dBuV/m)

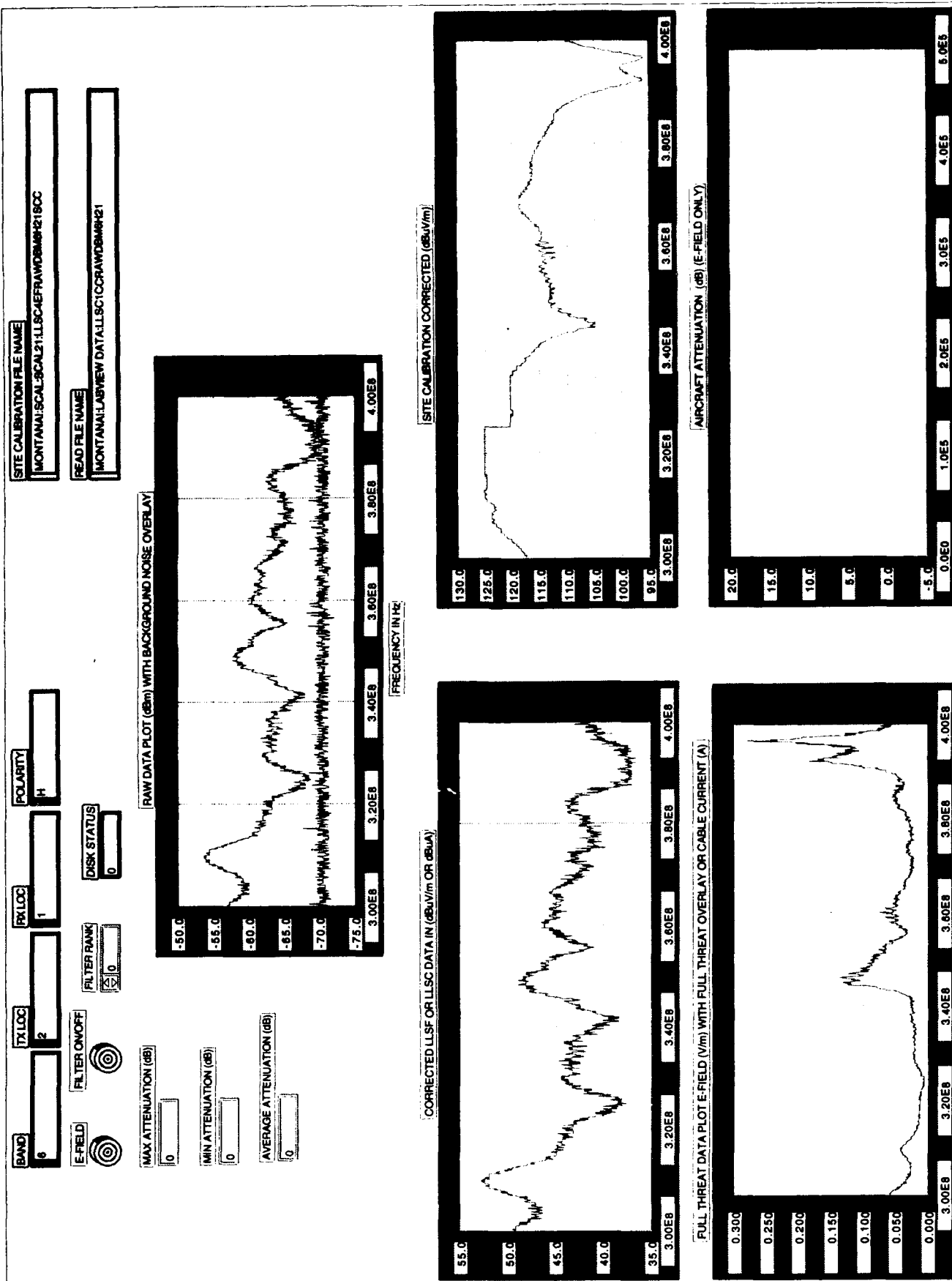


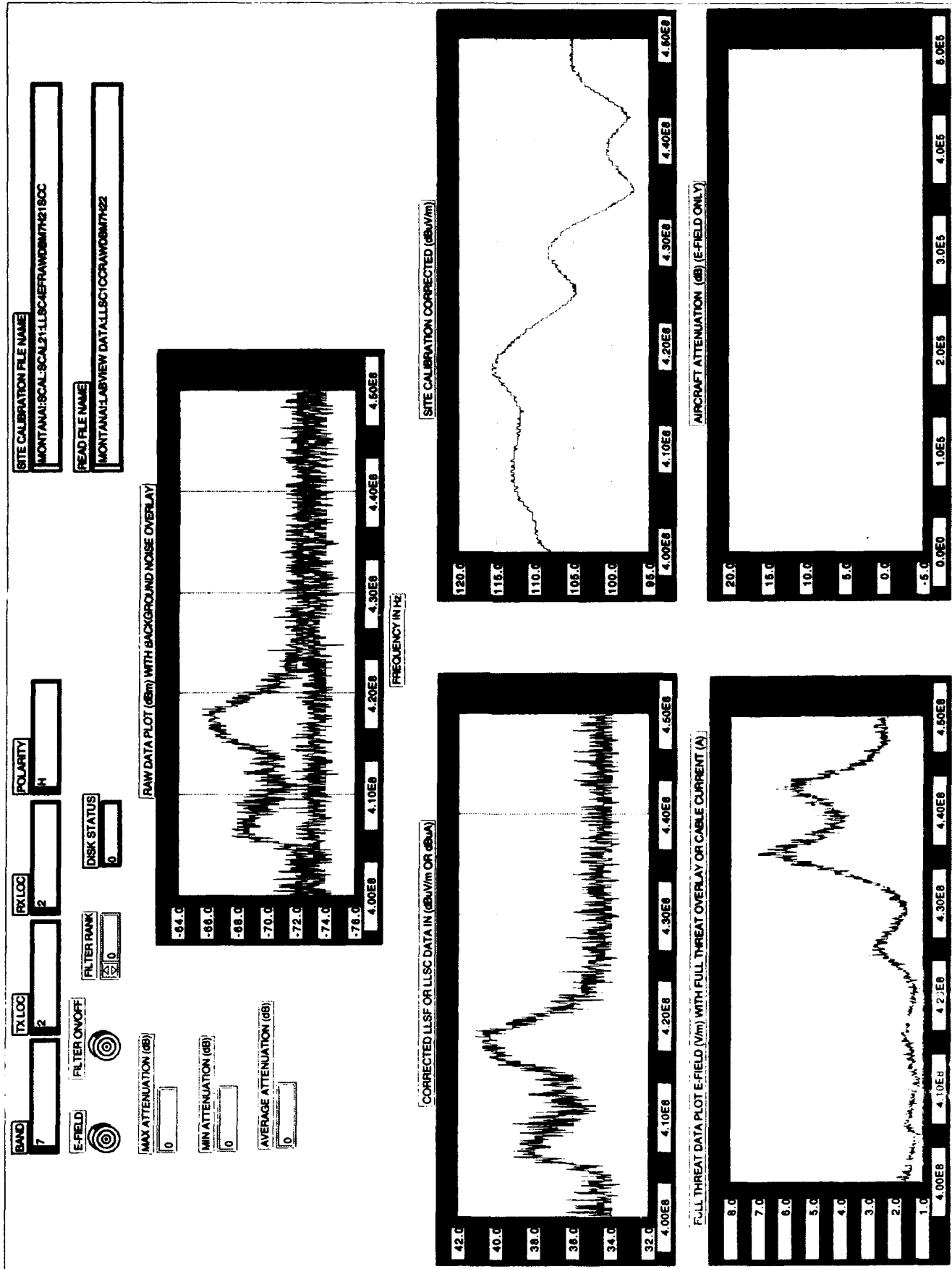
FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)





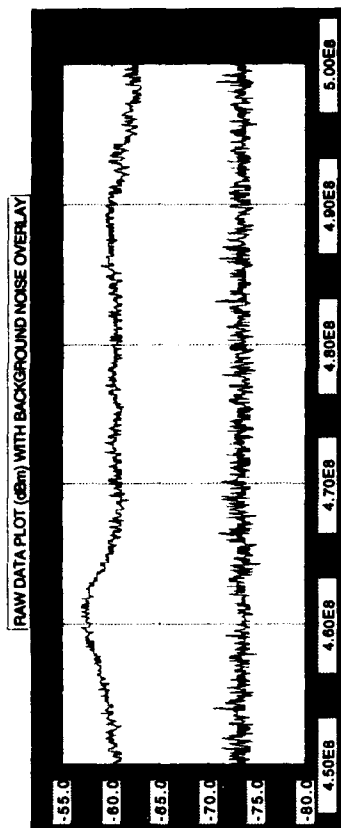


SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL21:LLSC4FRANDM42180C

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC4FRANDM42180C

BAND 8 TX LOC 2 RX LOC 2 POLARITY H

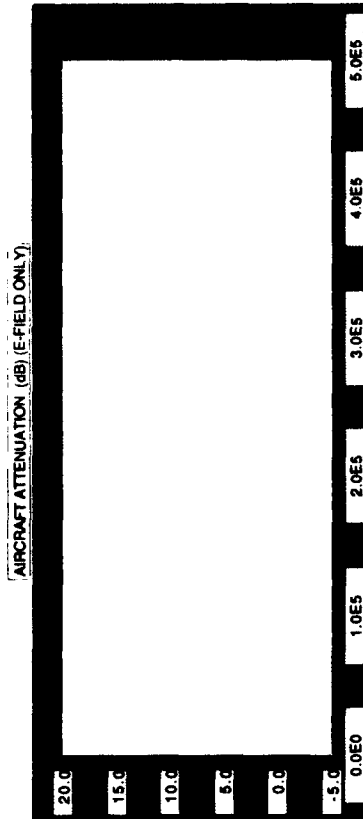
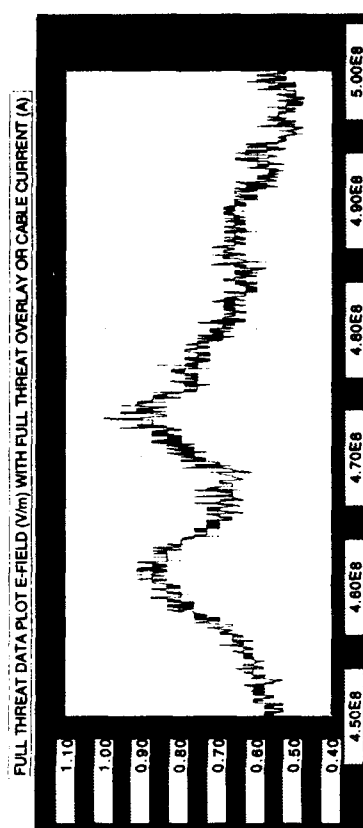
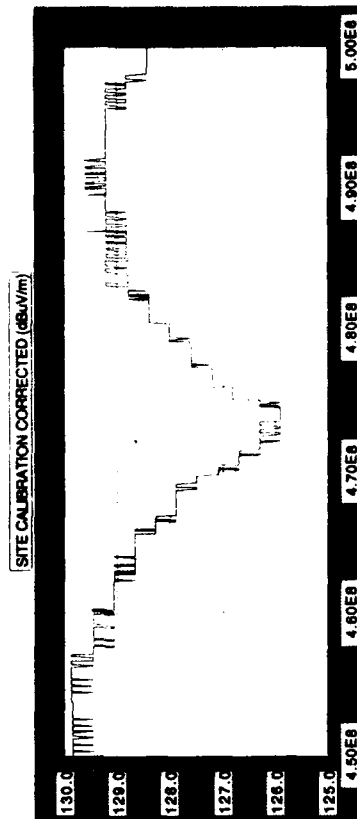
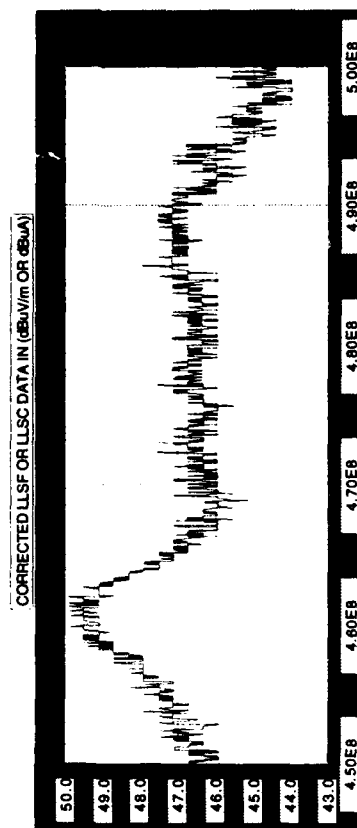
E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0



MAX ATTENUATION (dB) 10

MIN ATTENUATION (dB) 10

AVERAGE ATTENUATION (dB) 0



BAND **TX LOC** **PX LOC** **POLARITY**

E-FIELD ☒ **FILTER ON/OFF** ☒ **FILTER RANK** **DISK STATUS**

MAX ATTENUATION (dB) **MIN ATTENUATION (dB)** **AVERAGE ATTENUATION (dB)**

SITE CALIBRATION FILE NAME

READ FILE NAME

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

SITE CALIBRATION CORRECTED (dBuV/m)

CORRECTED LLSF OR LLSC DATA IN (dBuV/m OR dBuA)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

SECTION 2-2
CO-PILOT DISPLAY UNIT LLSC DATA PLOTS

BAND

1

TX LOC

1

RX LOC

2

POLARITY

H

SITE CALIBRATION FILE NAME

MONTANA\SCAL\11\LS4E\RAWDBM1H11SOC

READ FILE NAME

MONTANA\LABVIEW DATA\LLSC\CCRAWDBM1H12

E-FIELD

☒

FILTER ON/OFF

☒

FILTER RANK

0

DISK STATUS

0

MAX ATTENUATION (dB)

0

MIN ATTENUATION (dB)

0

AVERAGE ATTENUATION (dB)

0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

CORRECTED LLSF OR LLSC DATA IN (dBuV/m OR dBuA)

SITE CALIBRATION CORRECTED (dBuV/m)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

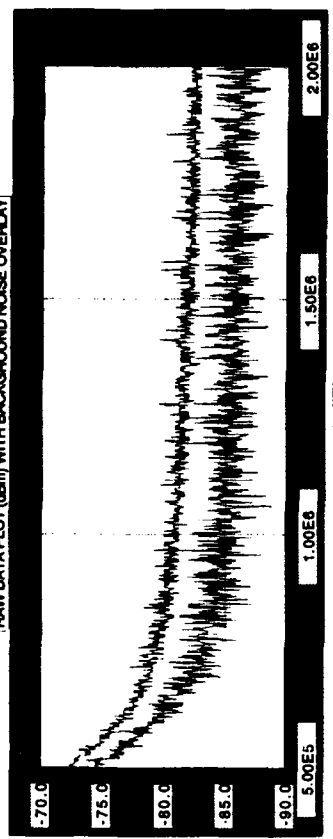
SITE CALIBRATION FILE NAME
MONTANA:SCAL11LLSCAFRAWD8M2H11SCC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC10CRAWDM2H12

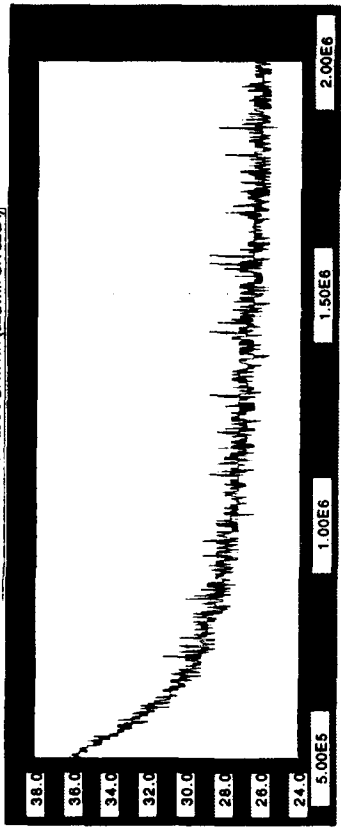
BAND 2 TX LOC 1 RX LOC 2 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0

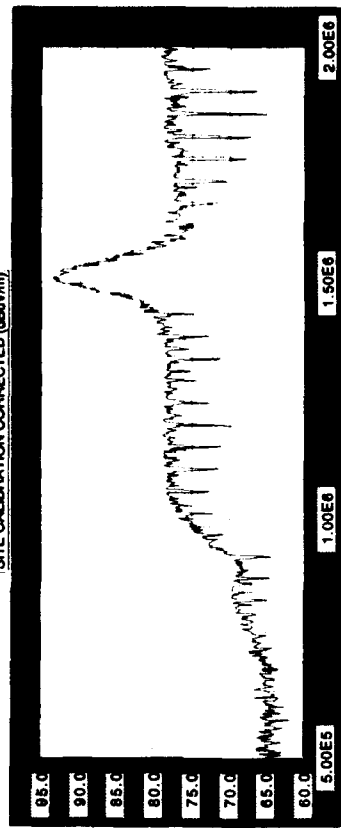
RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY



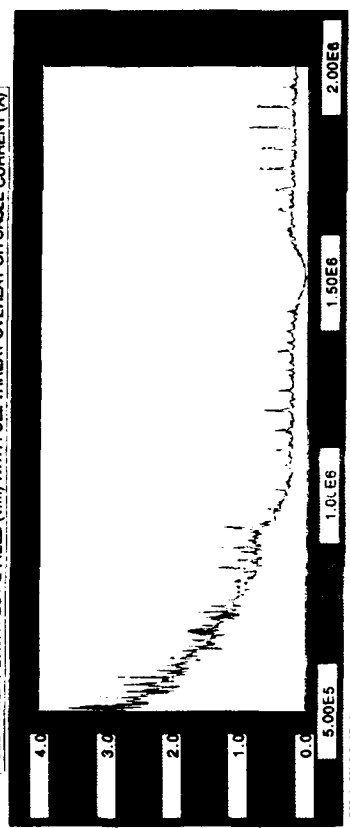
CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)



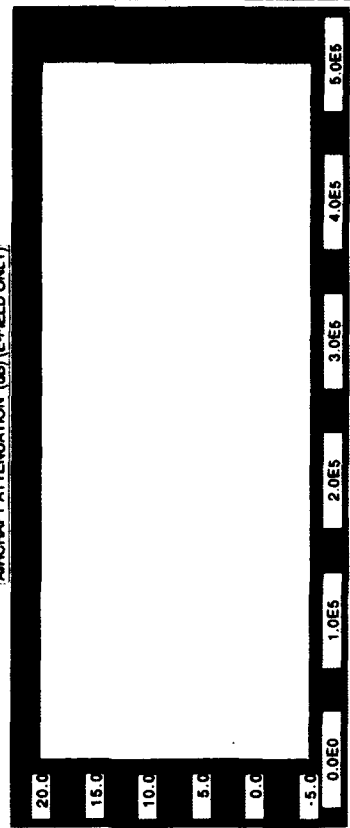
SITE CALIBRATION CORRECTED (dBuV/m)



FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

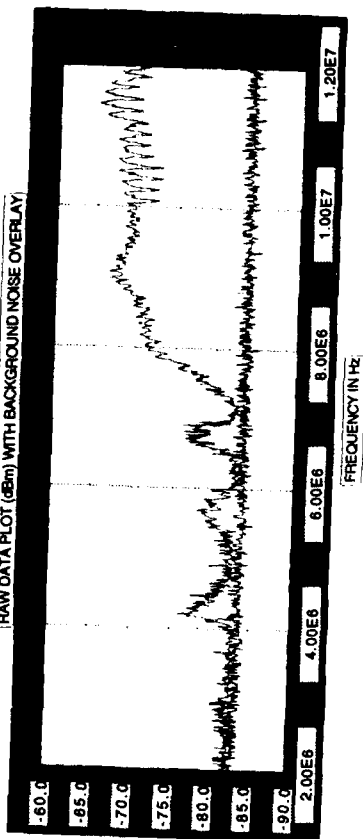


AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

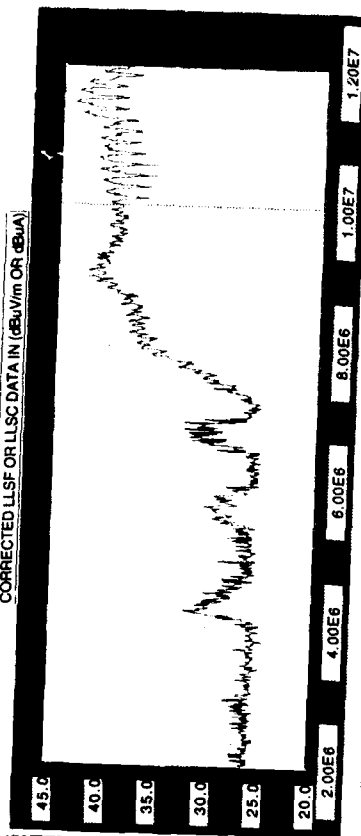


BAND TX LOC RX LOC POLARITY
 E-FIELD ☐ FILTER ON/OFF ☐ FILTER RANK
 MAX ATTENUATION (dB) MIN ATTENUATION (dB) AVERAGE ATTENUATION (dB)
 SITE CALIBRATION FILE NAME
 READ FILE NAME

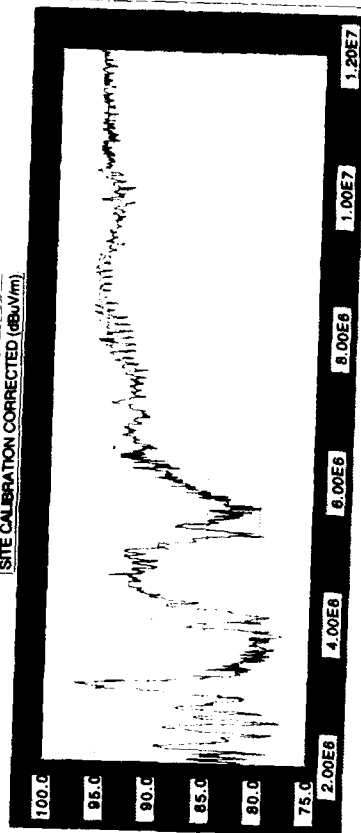
RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY



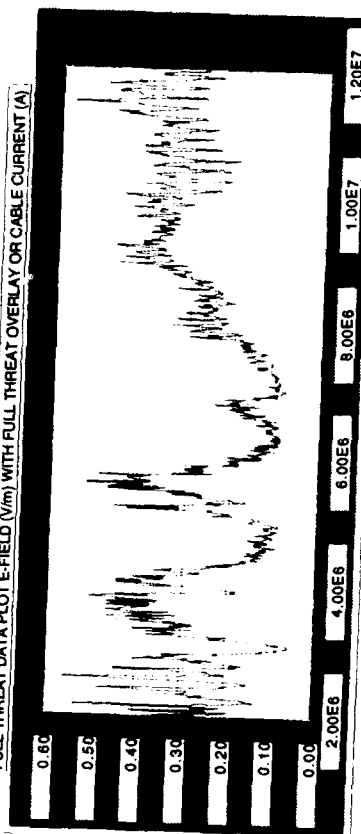
CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)



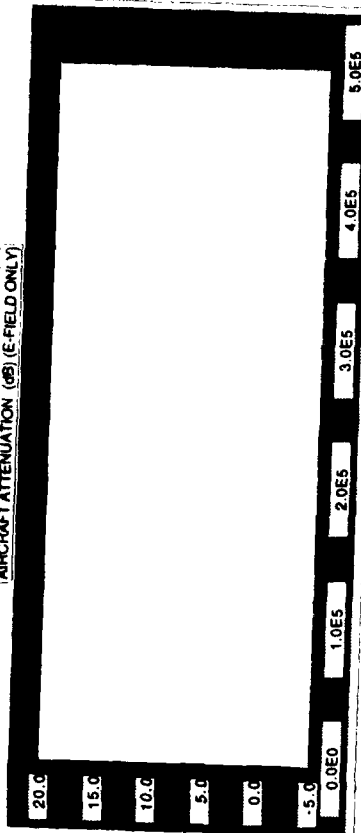
SITE CALIBRATION CORRECTED (dBuV/m)

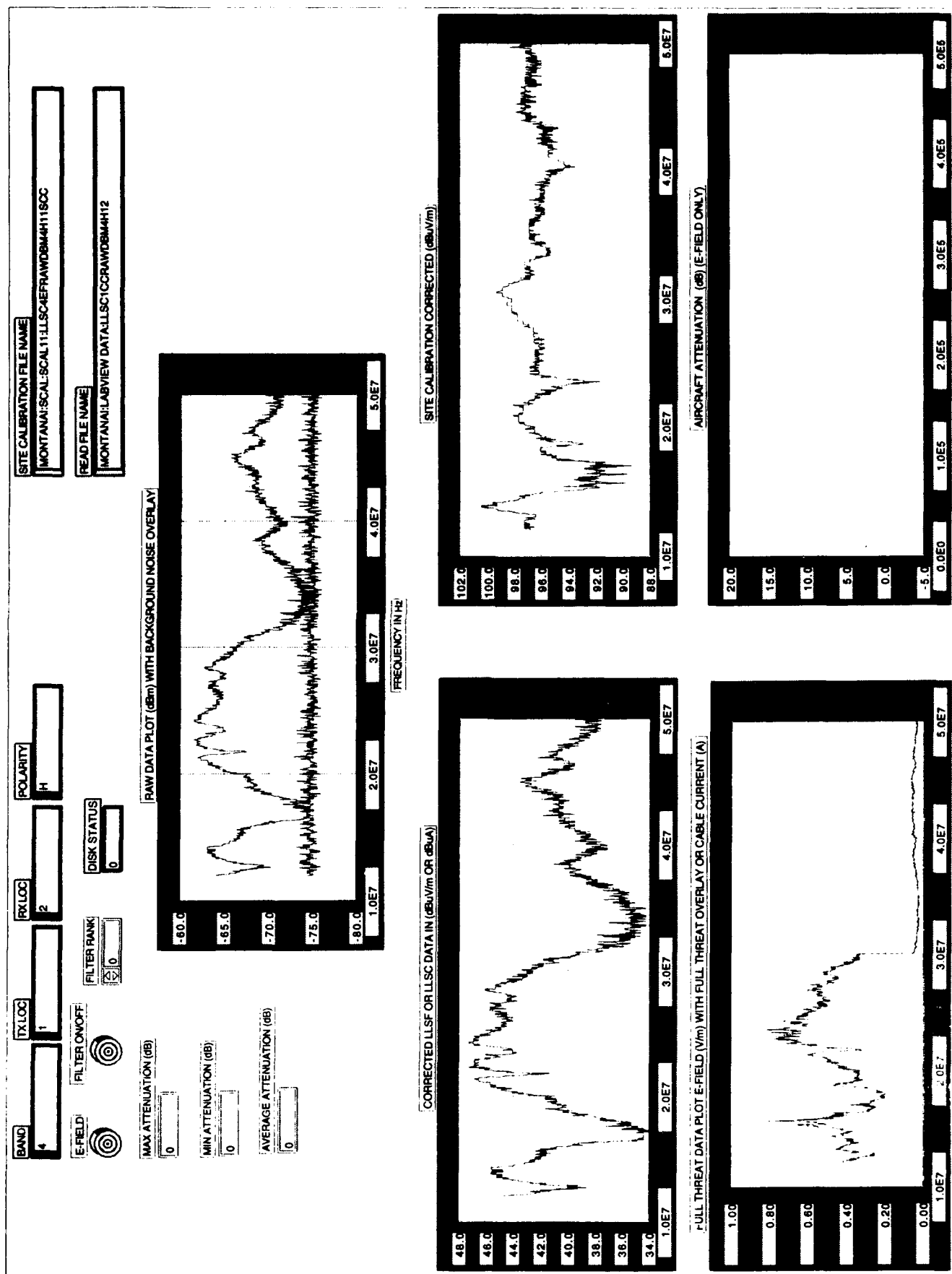


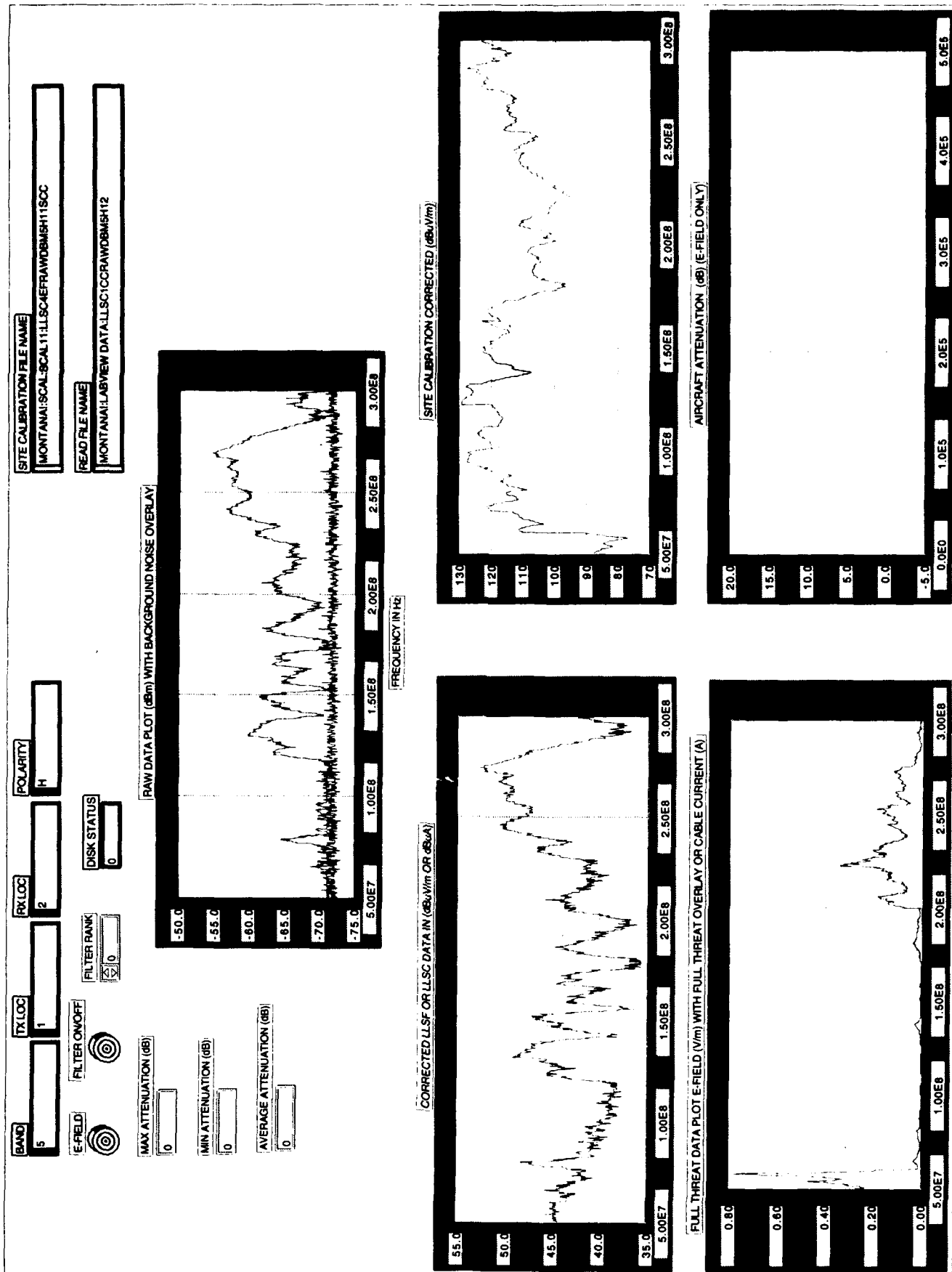
FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)







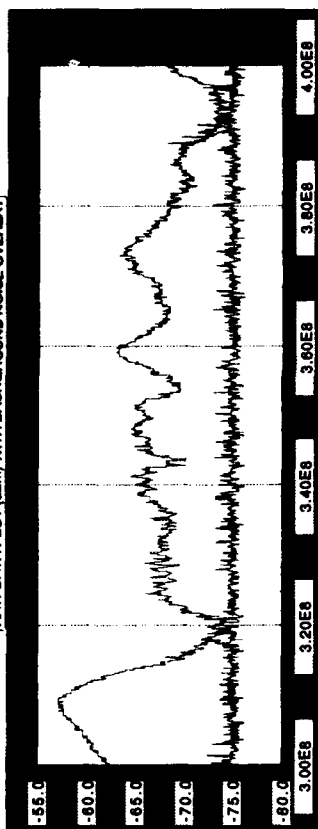
SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL11LLSC4EFRAWD8M8H11SCC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC1CCRAWD8M8H12

BAND 0 TX LOC 1 RX LOC 2 POLARITY H

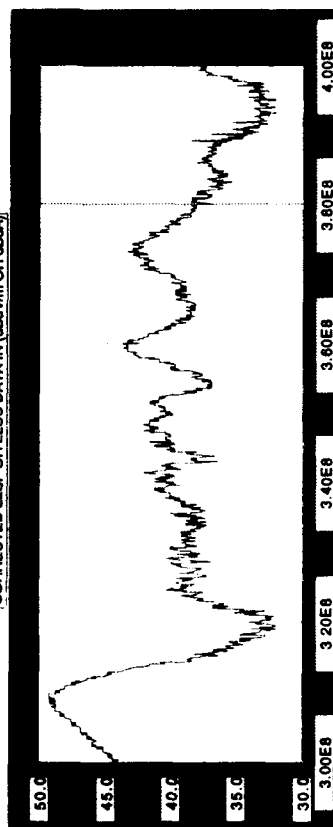
E-FIELD ☒ FILTER ON/OFF ☒ FILTER BANK ☒ DISK STATUS 0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

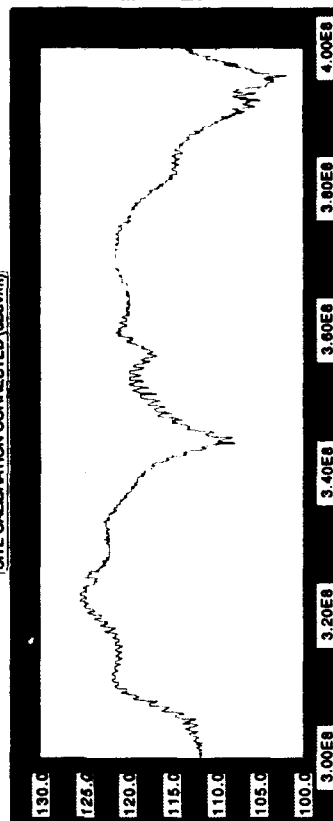


FREQUENCY IN Hz

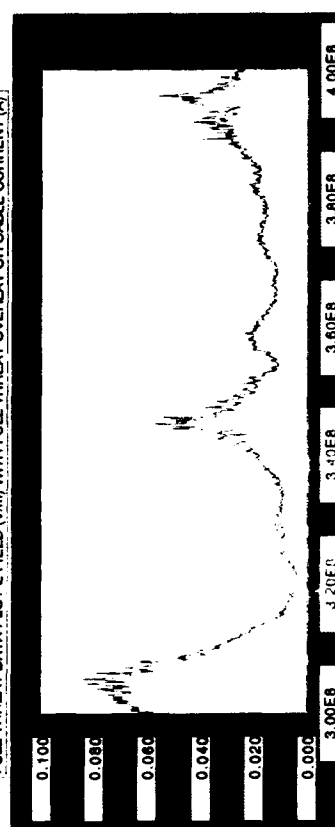
CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)



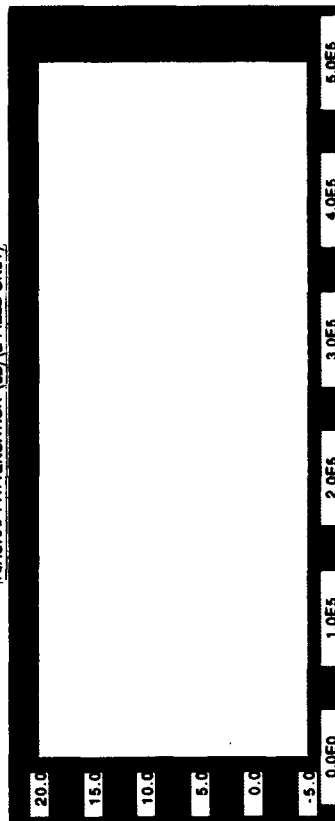
SITE CALIBRATION CORRECTED (dBuV/m)

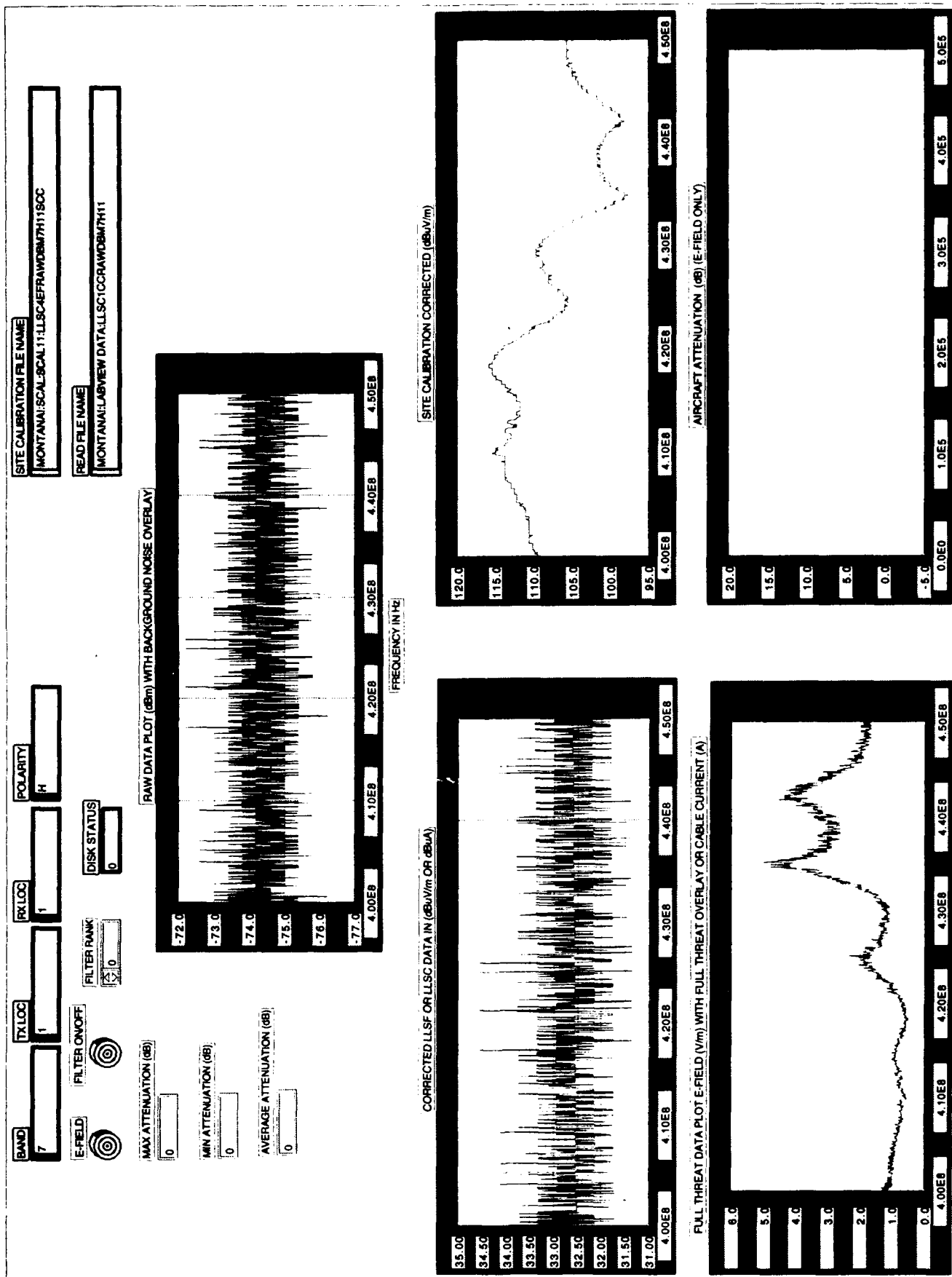


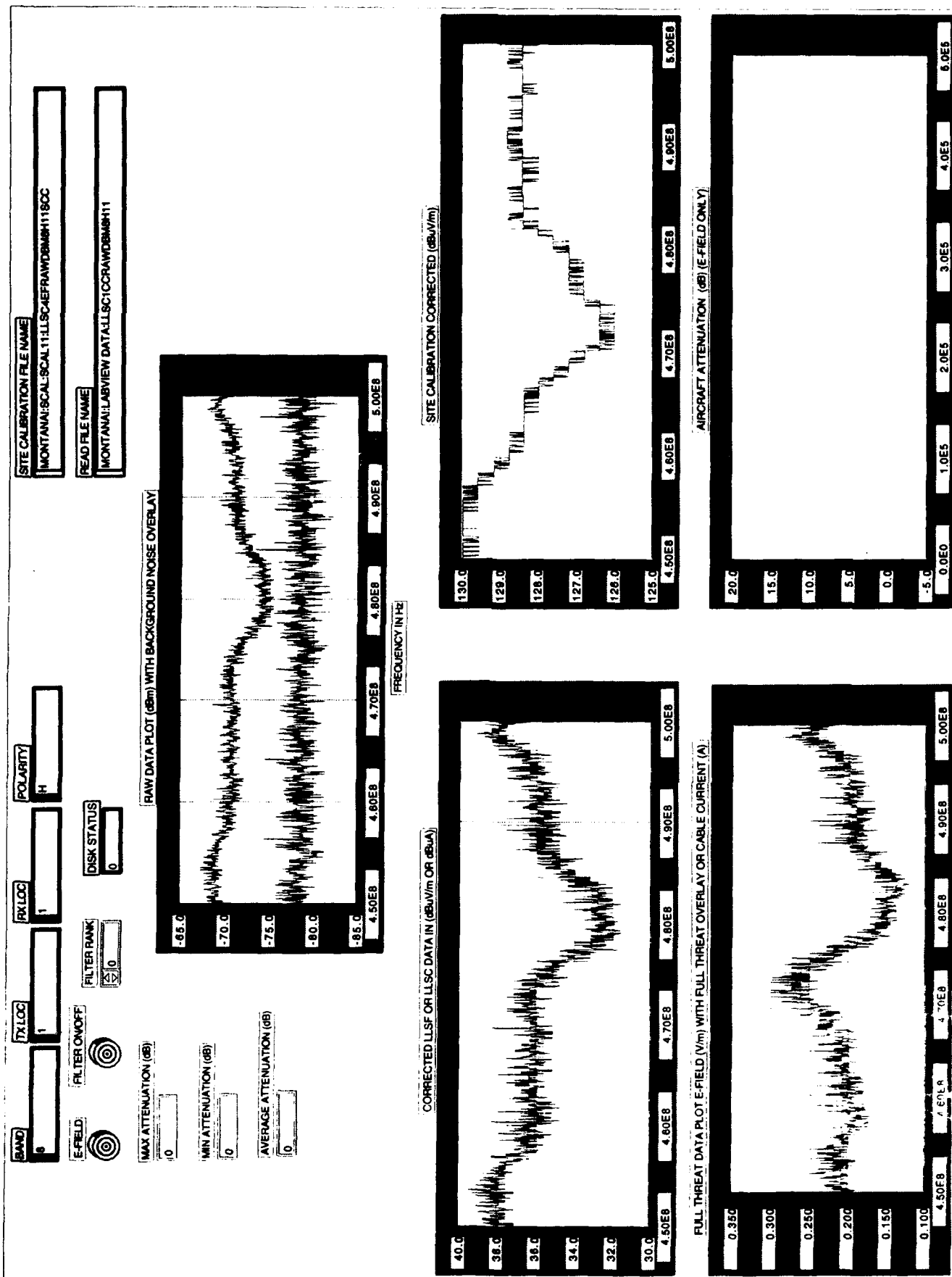
FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)







SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL11LLSCAFRAWD8M8H11S0C

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC1CORAWD8M8H11

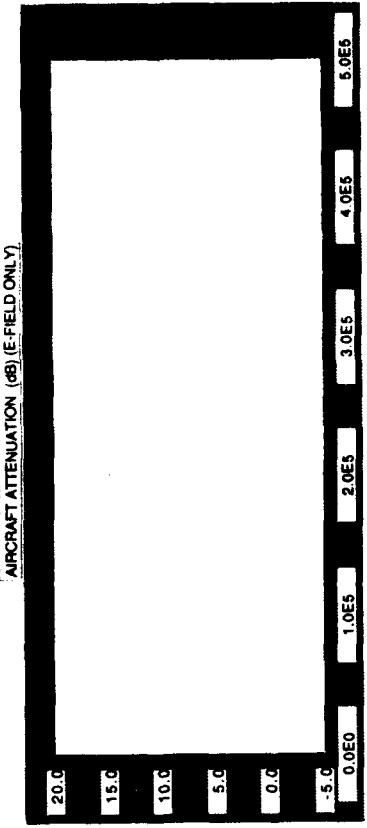
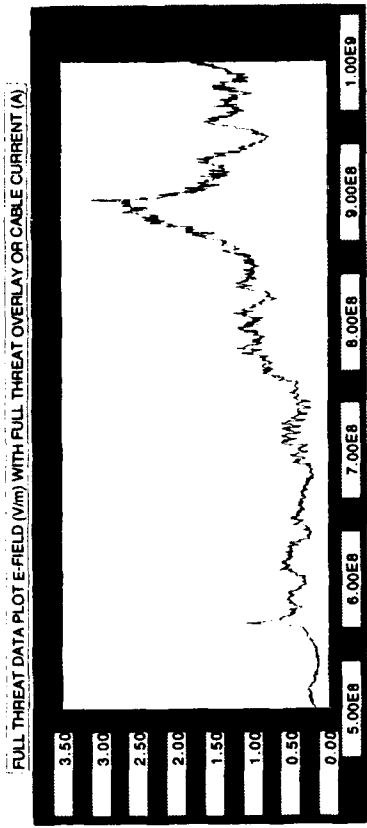
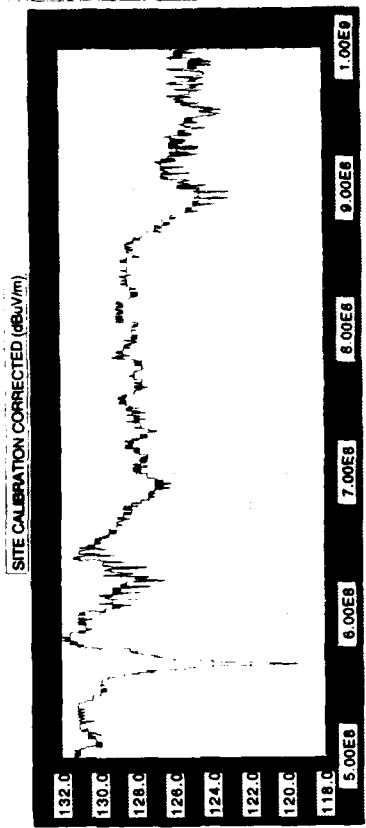
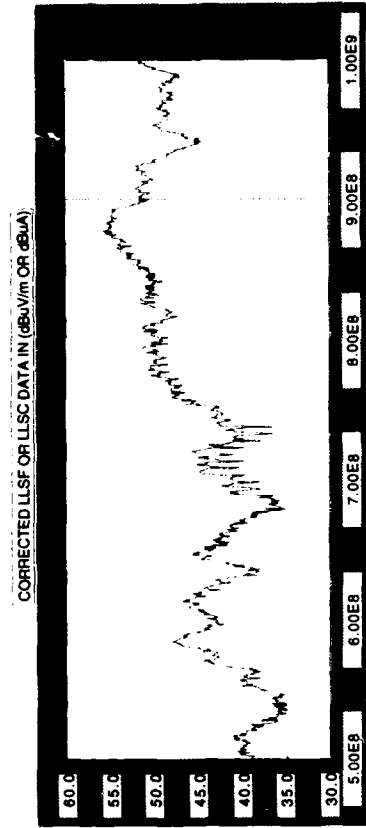
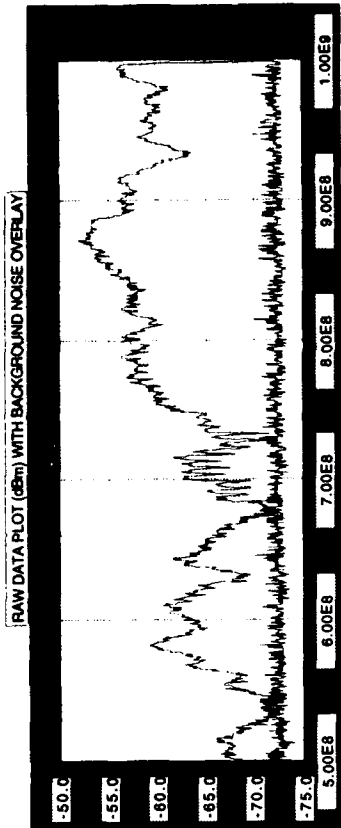
BAND 9 TX LOC 1 RX LOC 1 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0

MAX ATTENUATION (dB) 0

MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0



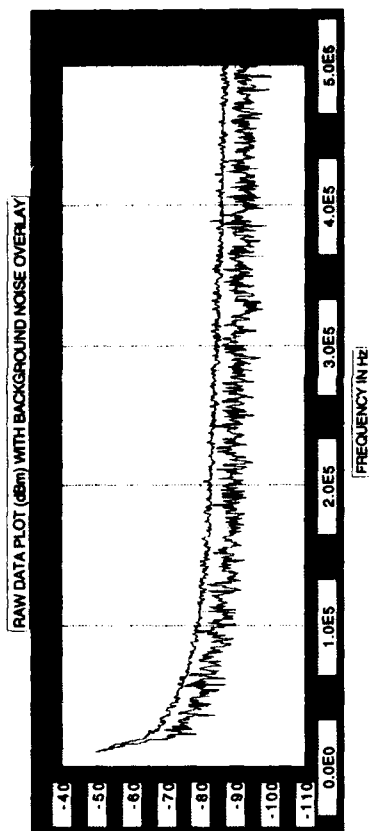
SECTION 2-3
ALTITUDE INDICATOR LLSC DATA PLOTS

SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL211:SC4EFRANDM1H21SCC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC10CRAWDM1H14

BAND 1 TX LOC 1 RX LOC 4 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0

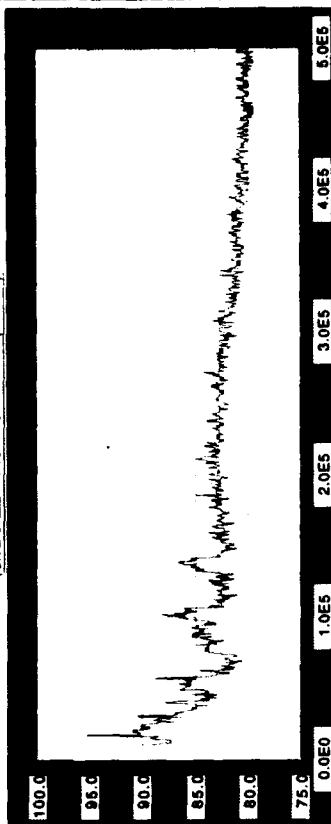


MAX ATTENUATION (dB) 10

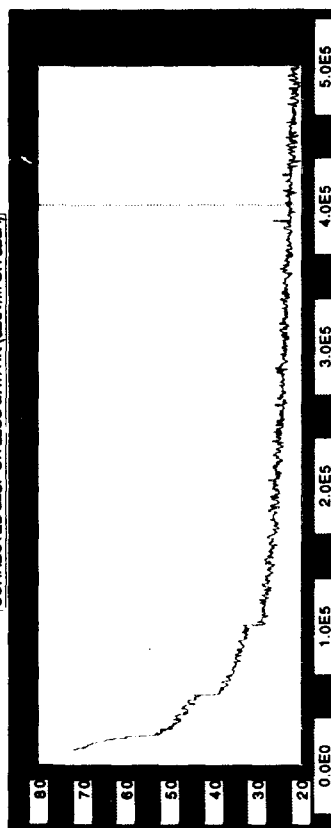
MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0

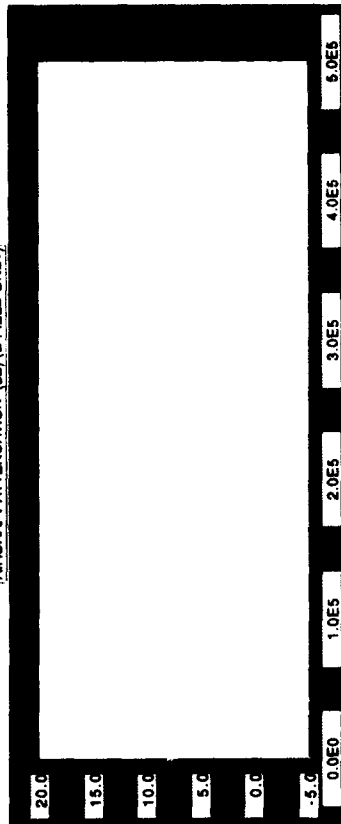
SITE CALIBRATION CORRECTED (dBuV/m)



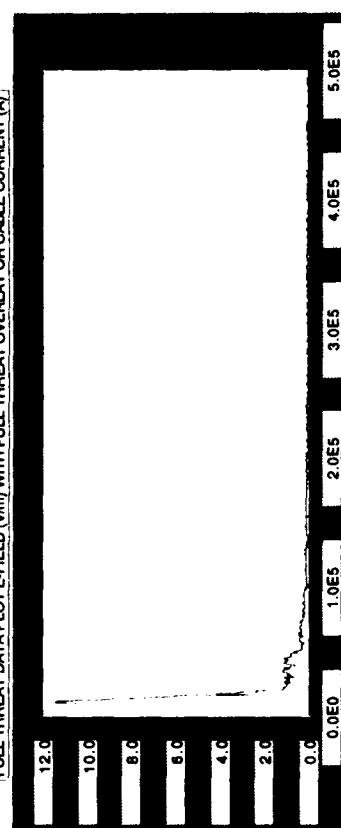
CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL211:SC4EFRAWDSM2121SCC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC1CCRAWDSM2H14

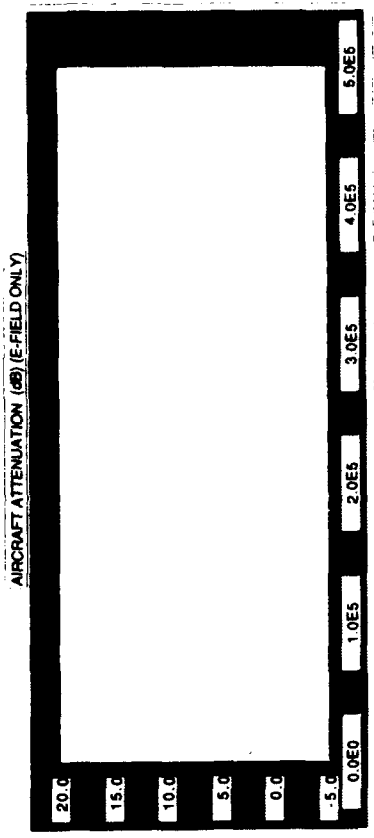
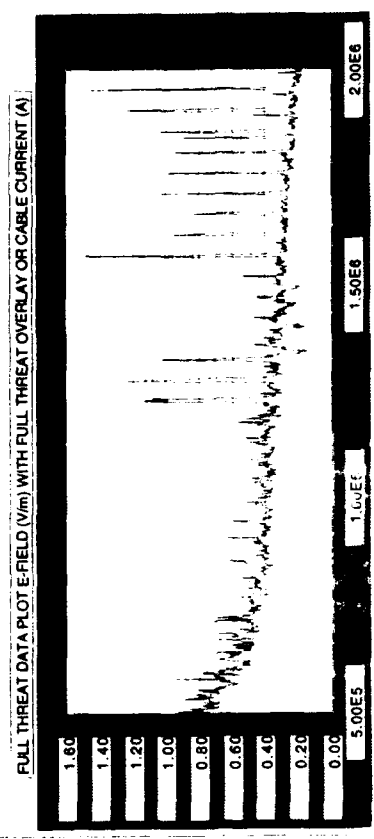
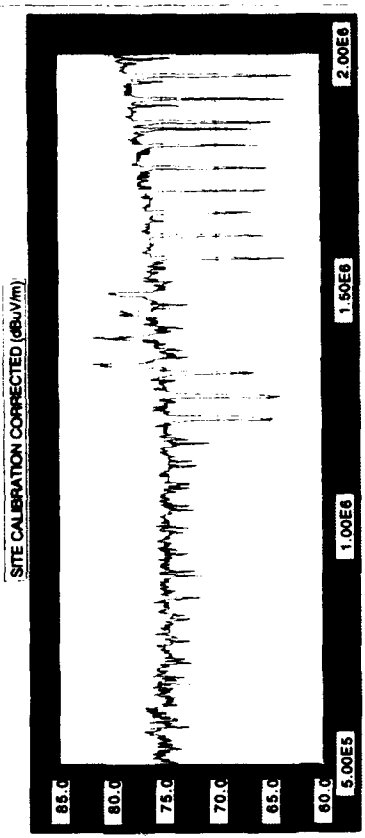
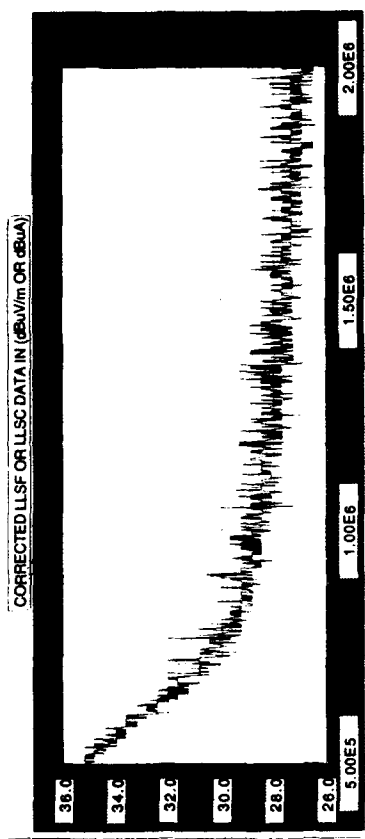
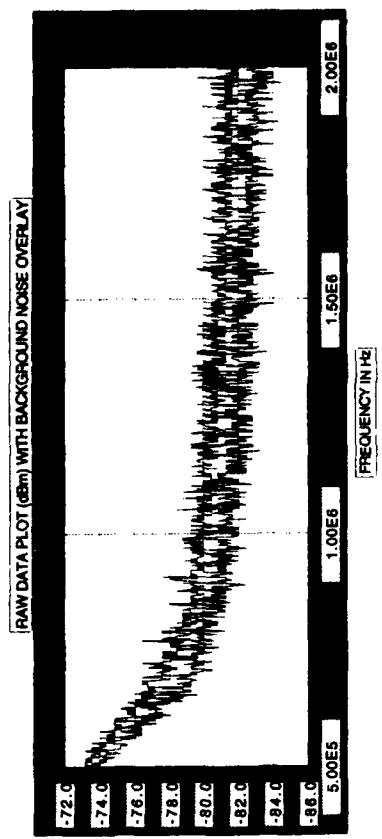
BAND 2 TX LOG 1 RX LOG 4 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0

MAX ATTENUATION (dB) 0

MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0



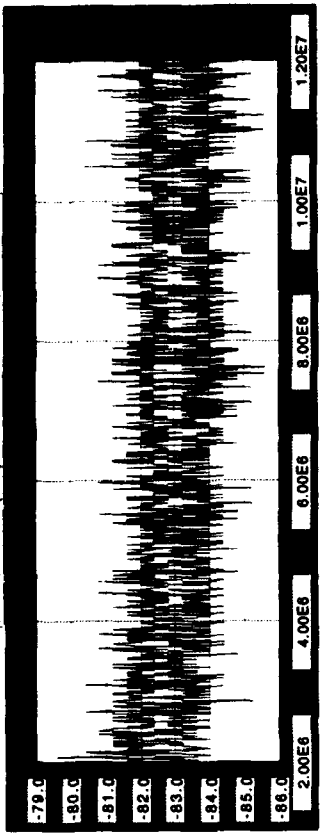
SITE CALIBRATION FILE NAME
MONTANA/SCAL/SCAL21/LLSC/EFRAWDBM3H21.SCC

READ FILE NAME
MONTANA/LABVIEW DATA/LLSC/CFRAWDBM3H14

BAND 3 TX LOC 1 RX LOC 4 POLARITY H

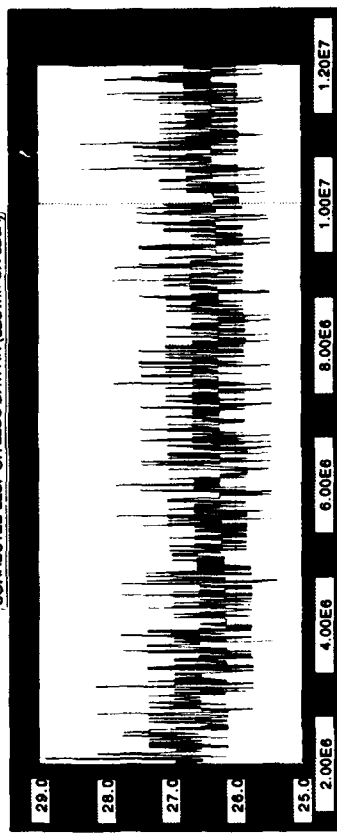
E-FIELD FILTER ON/OFF FILTER HANK DISK STATUS 0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

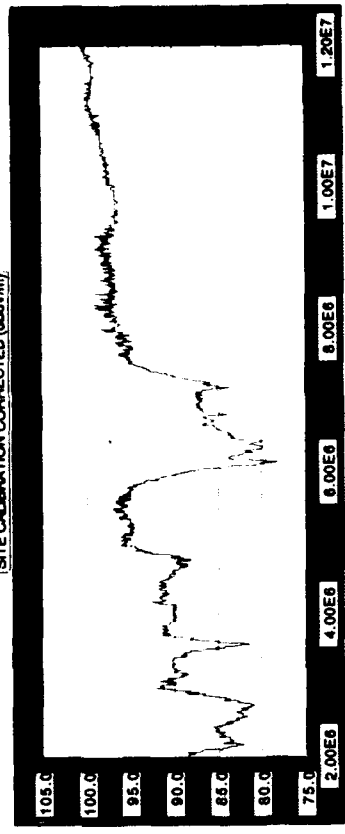


FREQUENCY IN HZ

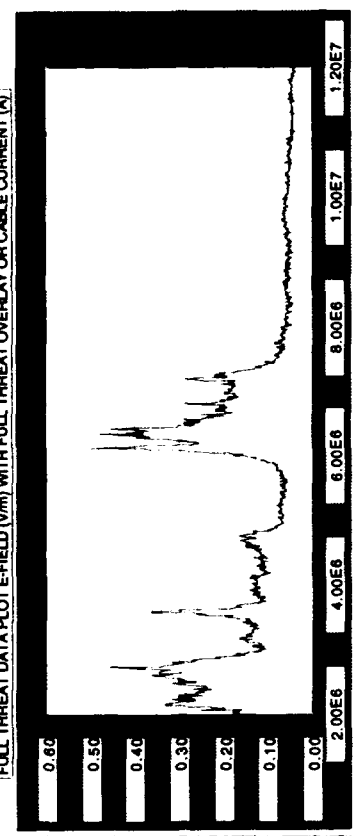
CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)



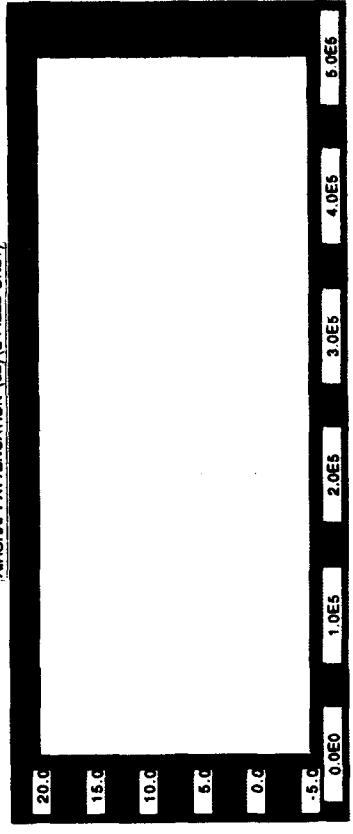
SITE CALIBRATION CORRECTED (dBuV/m)



FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



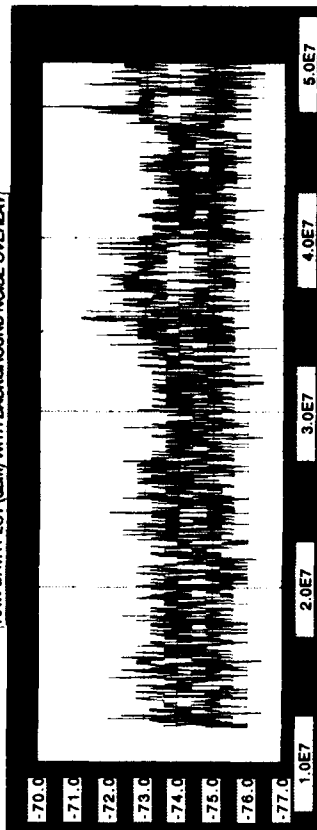
SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL21:LLSC:FRWDBM4H21SCC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC:ICCRWDBM4H14

BAND 4 TX LOC 1 RX LOC 4 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

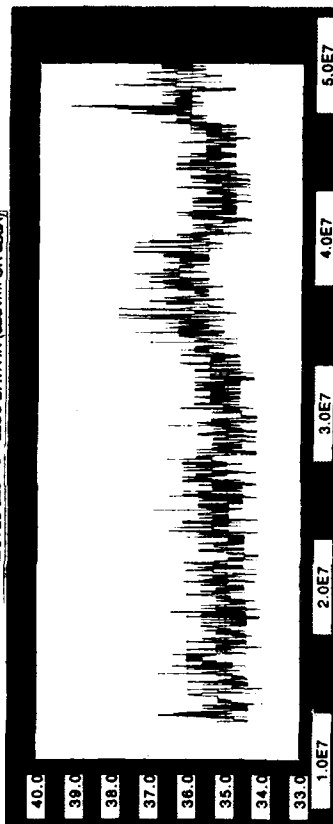


MAX ATTENUATION (dB) 0

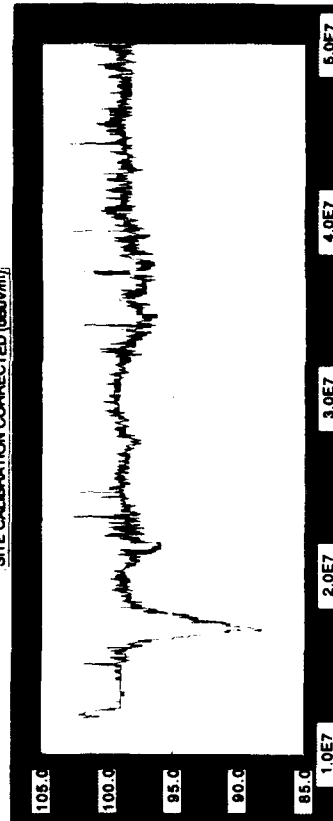
MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0

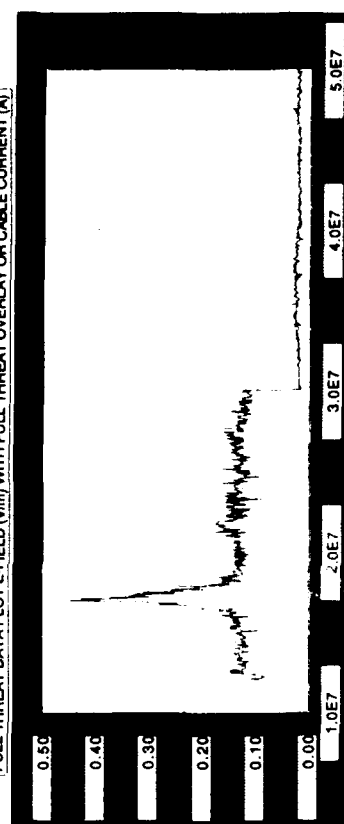
CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)



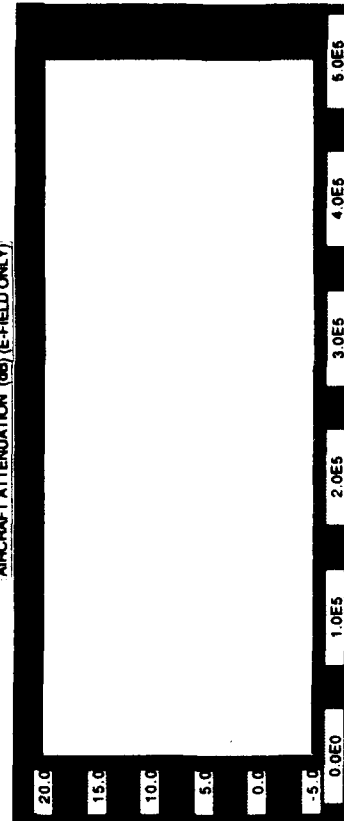
SITE CALIBRATION CORRECTED (dBuV/m)

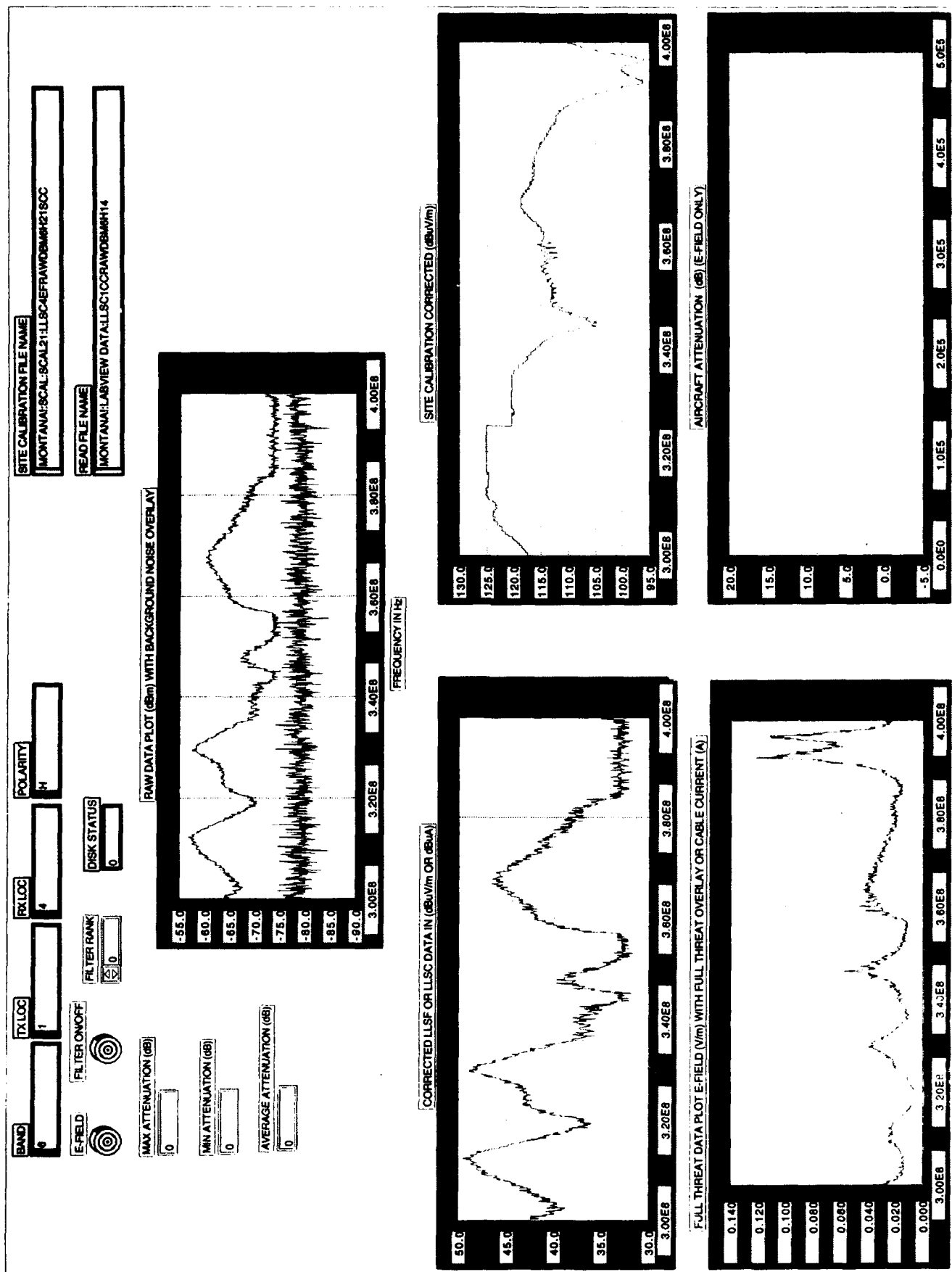


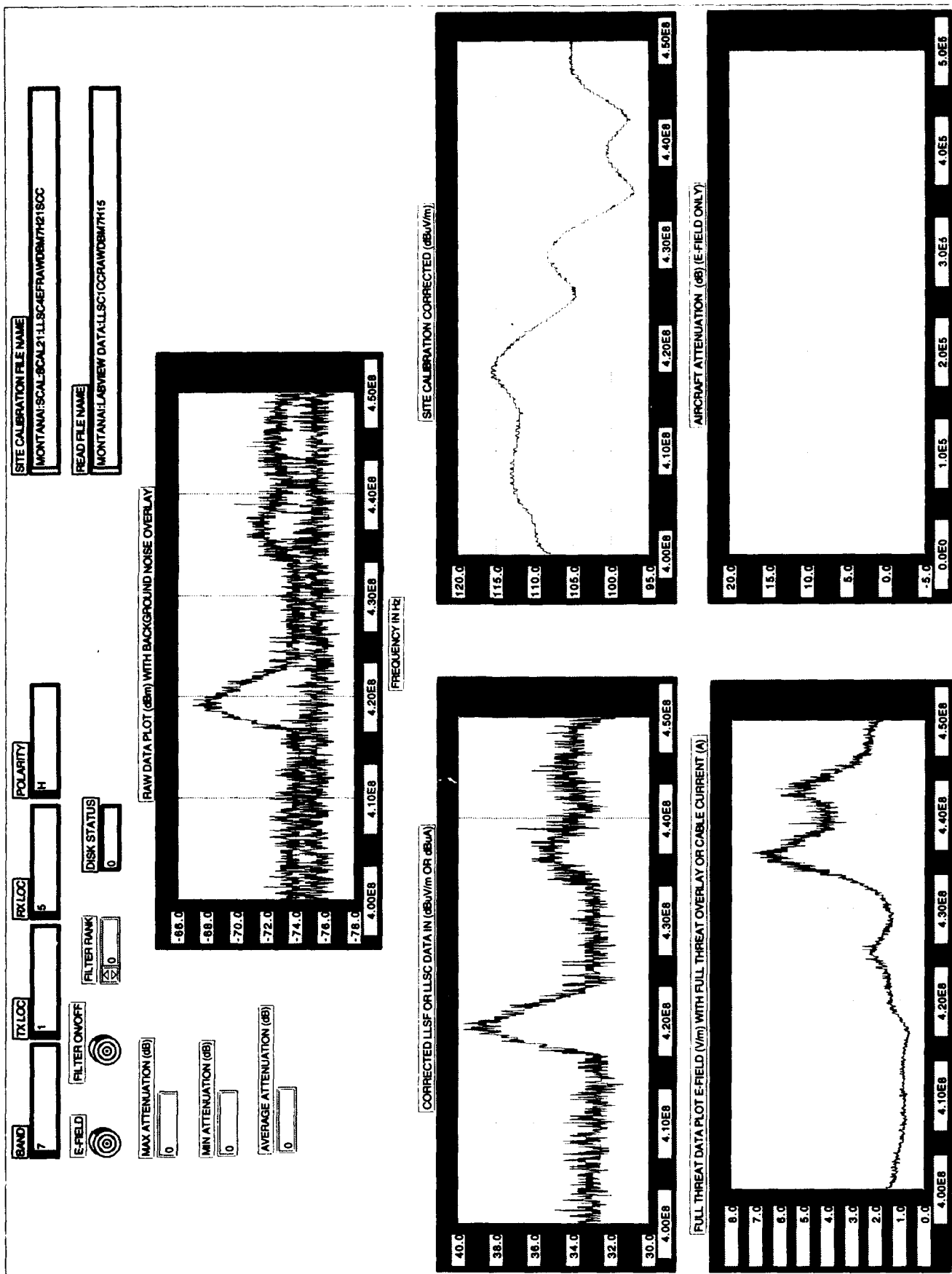
FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

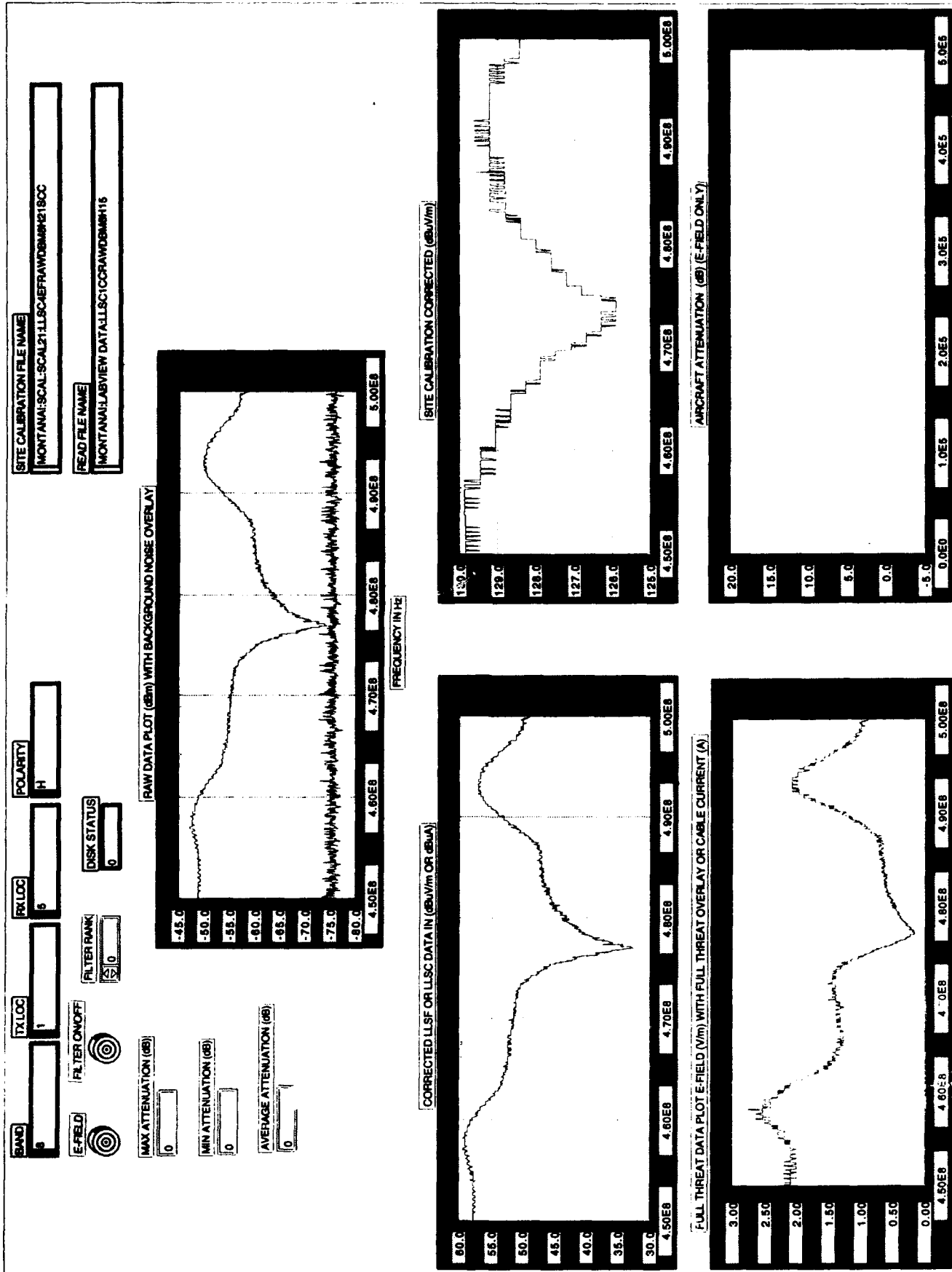


AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)









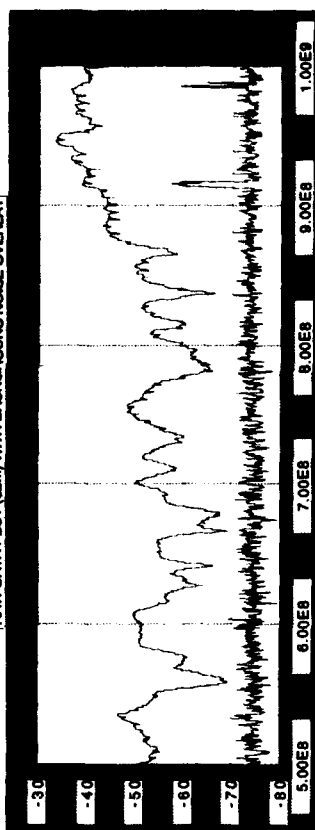
SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL21:LLSC4FFRAWD8MH421SCC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC1CCRAWD8MH15

BAND 9 TX LOC 1 RX LOC 5 POLARITY H

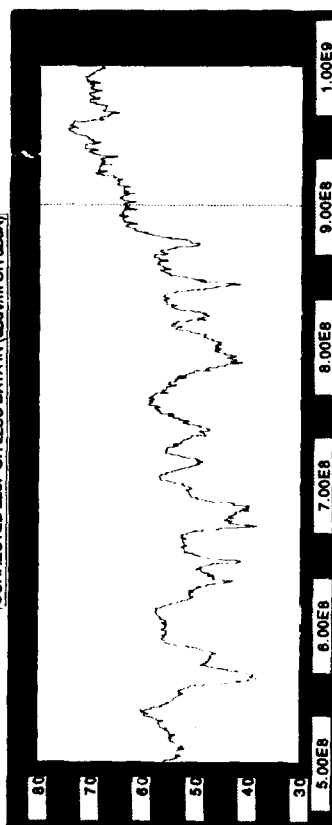
E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

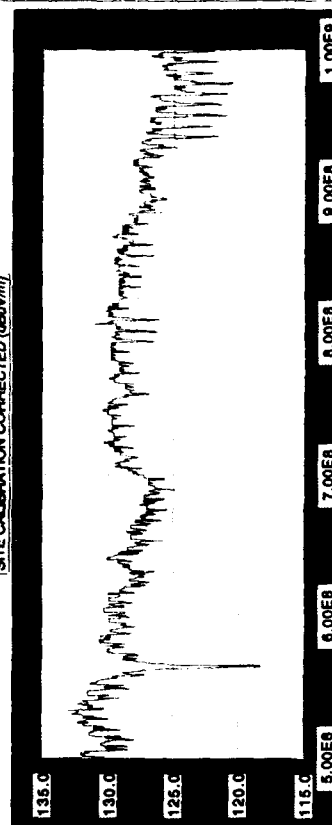


FREQUENCY (IN HZ)

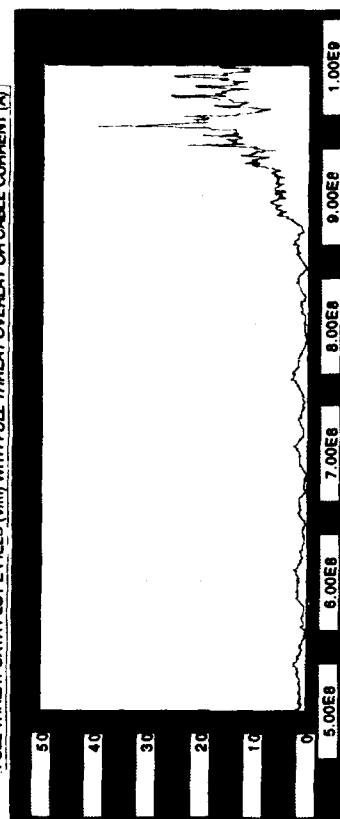
CORRECTED ILLSF OR LLSC DATA IN (dBuV/m OR dBuA)



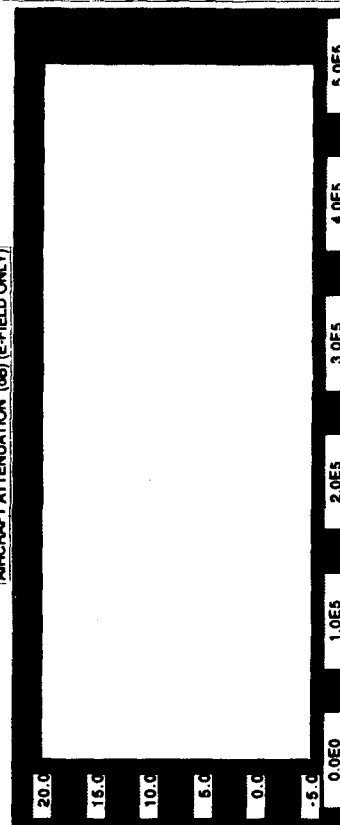
SITE CALIBRATION CORRECTED (dBuV/m)



FULL THREAT DATA PLOT E-FIELD (N/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



SITE CALIBRATION FILE NAME		MONTANA:SCAL:SCAL21LLSC4EPRANDSM1H2180C	
READ FILE NAME		MONTANA:LABVIEW DATA:LLSC1CCPRANDSM1H24	

BAND	TXLOC	RXLOC	POLARITY
1	2	4	H

E-FIELD	FILTER ON/OFF	FILTER BANK	DISK STATUS
<input checked="" type="radio"/>	<input checked="" type="radio"/>	10	0

MAX ATTENUATION (dB)	MIN ATTENUATION (dB)	AVERAGE ATTENUATION (dB)
0	0	0

SITE CALIBRATION FILE NAME
MONTANA\SCAL\SCAL21\LLSCAFRAWDBM2H2190C

READ FILE NAME
MONTANA\LABVIEW DATA\LLSC1CCRAWDBM2H2190C

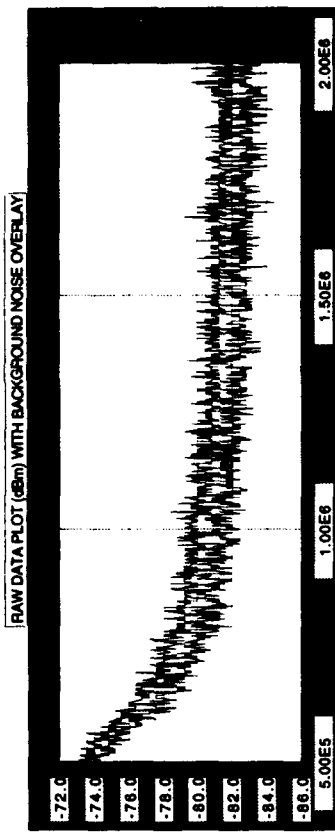
BAND 2 TXLOC 2 RXLOC 4 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 0 DISK STATUS 0

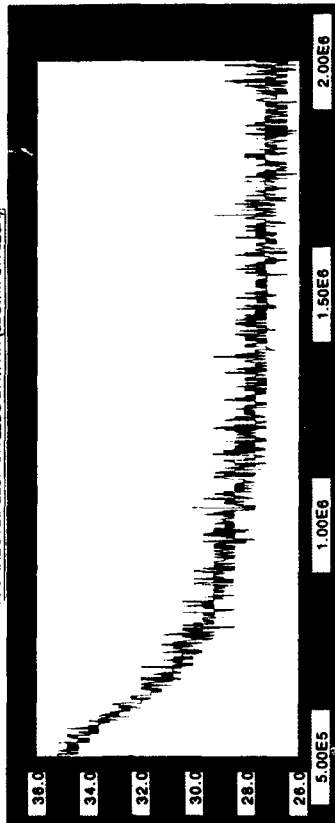
MAX ATTENUATION (dB) 0

MIN ATTENUATION (dB) 0

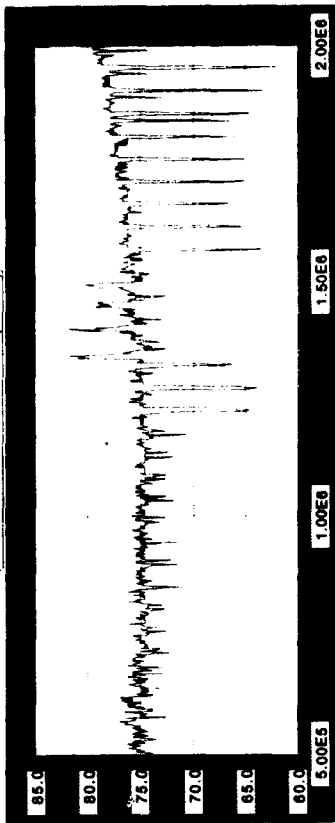
AVERAGE ATTENUATION (dB) 0



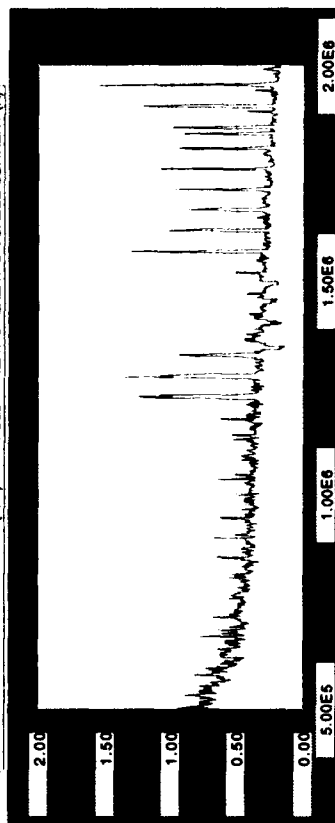
CORRECTED LLSP OR LLSC DATA IN (dBuV/m OR dBuA)



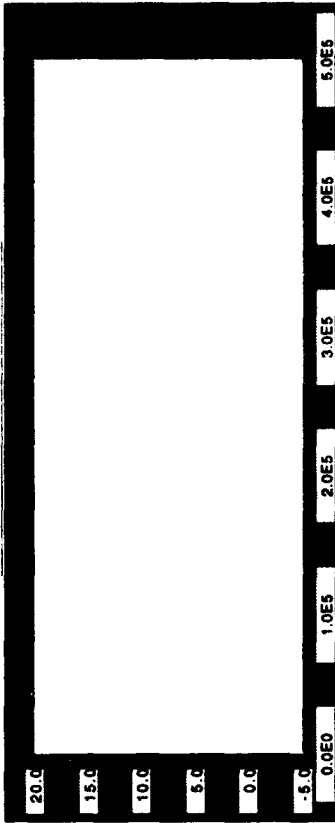
SITE CALIBRATION CORRECTED (dBuV/m)



FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

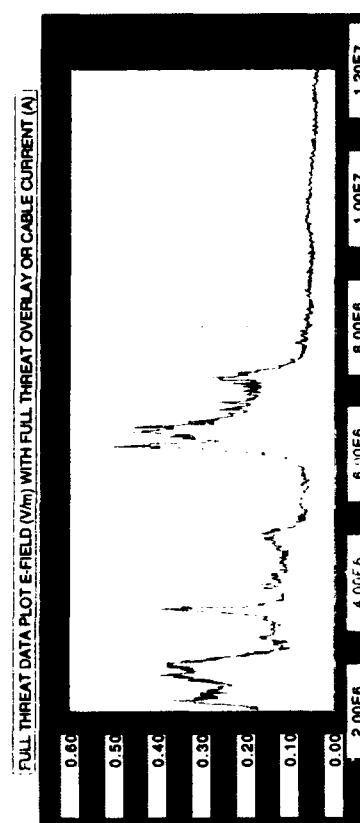
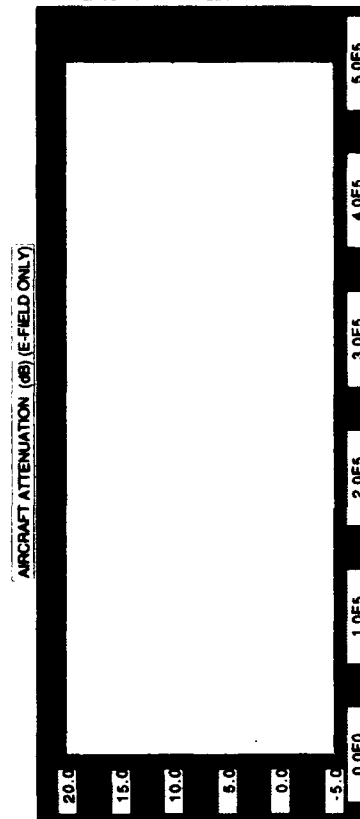
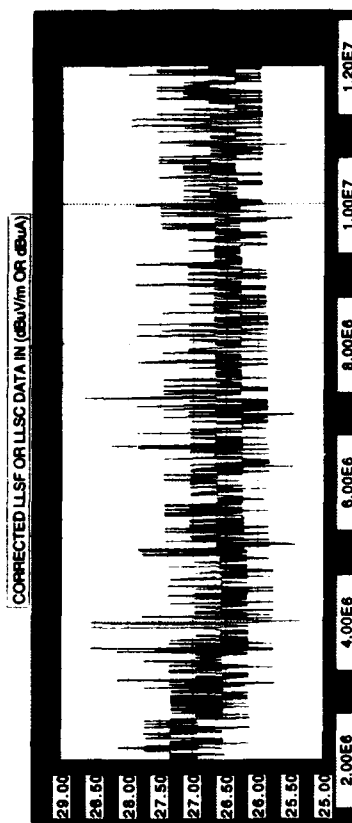
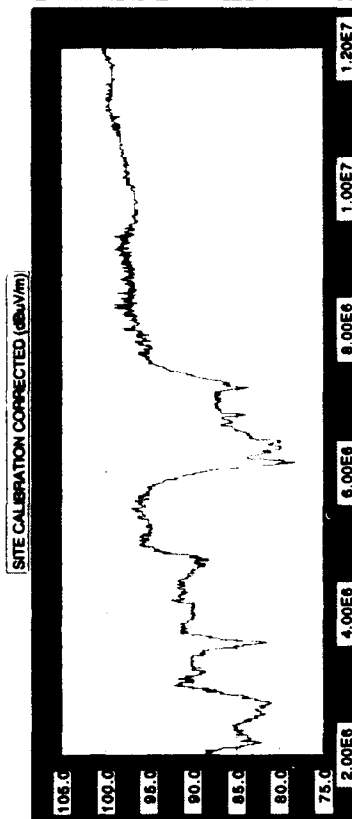
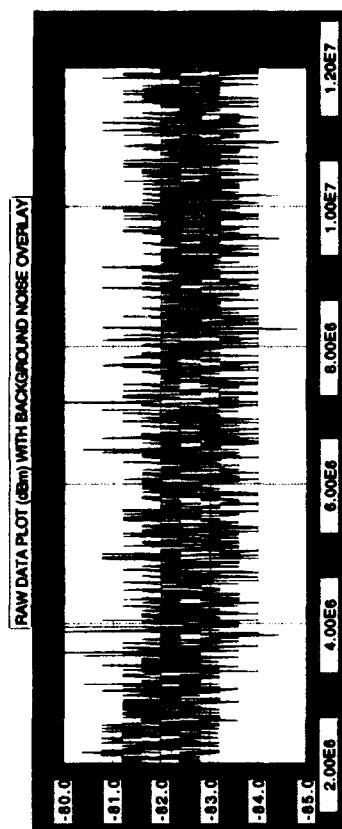


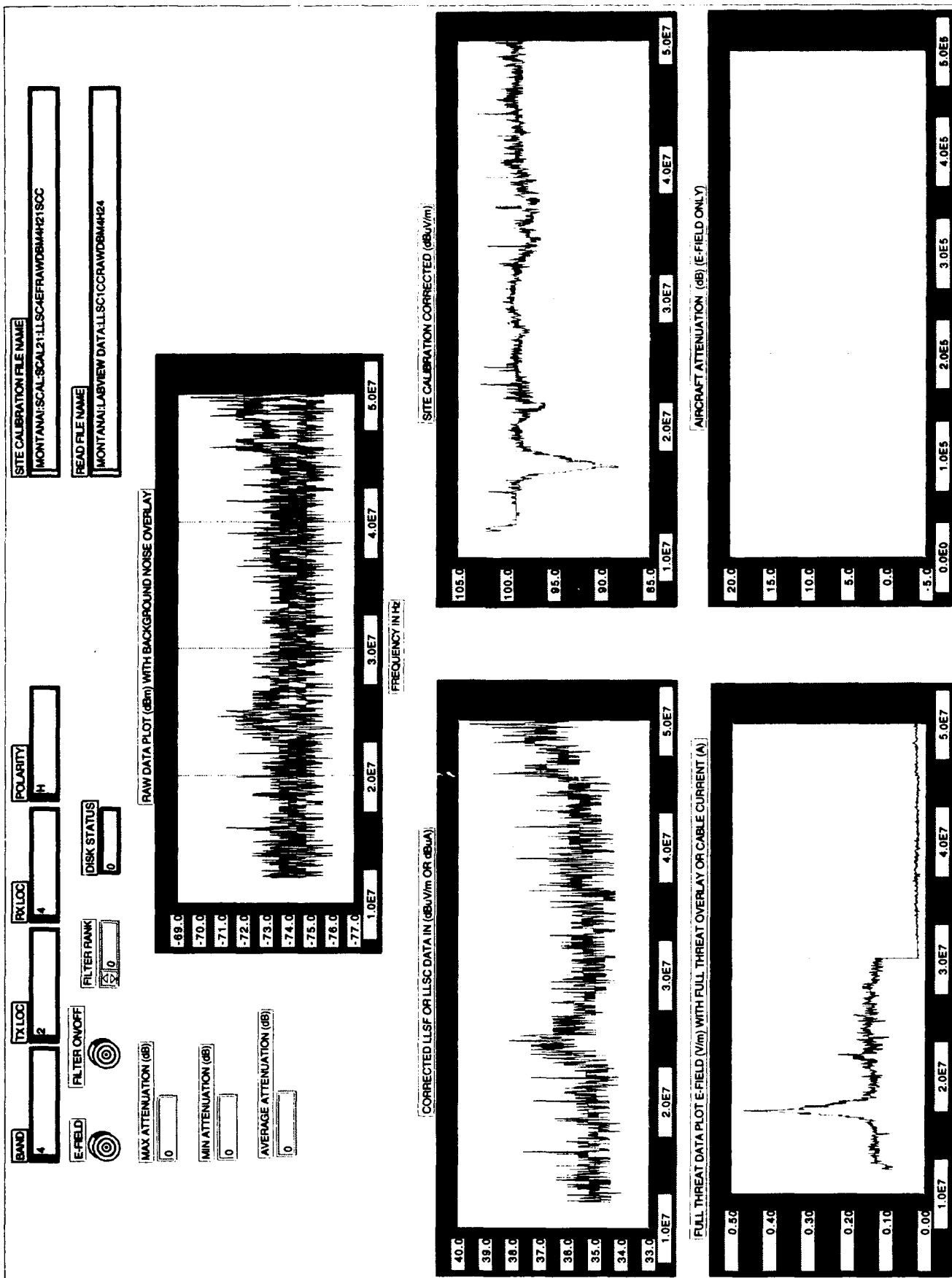
SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL2111SC4EFRAWD8M3H2180C

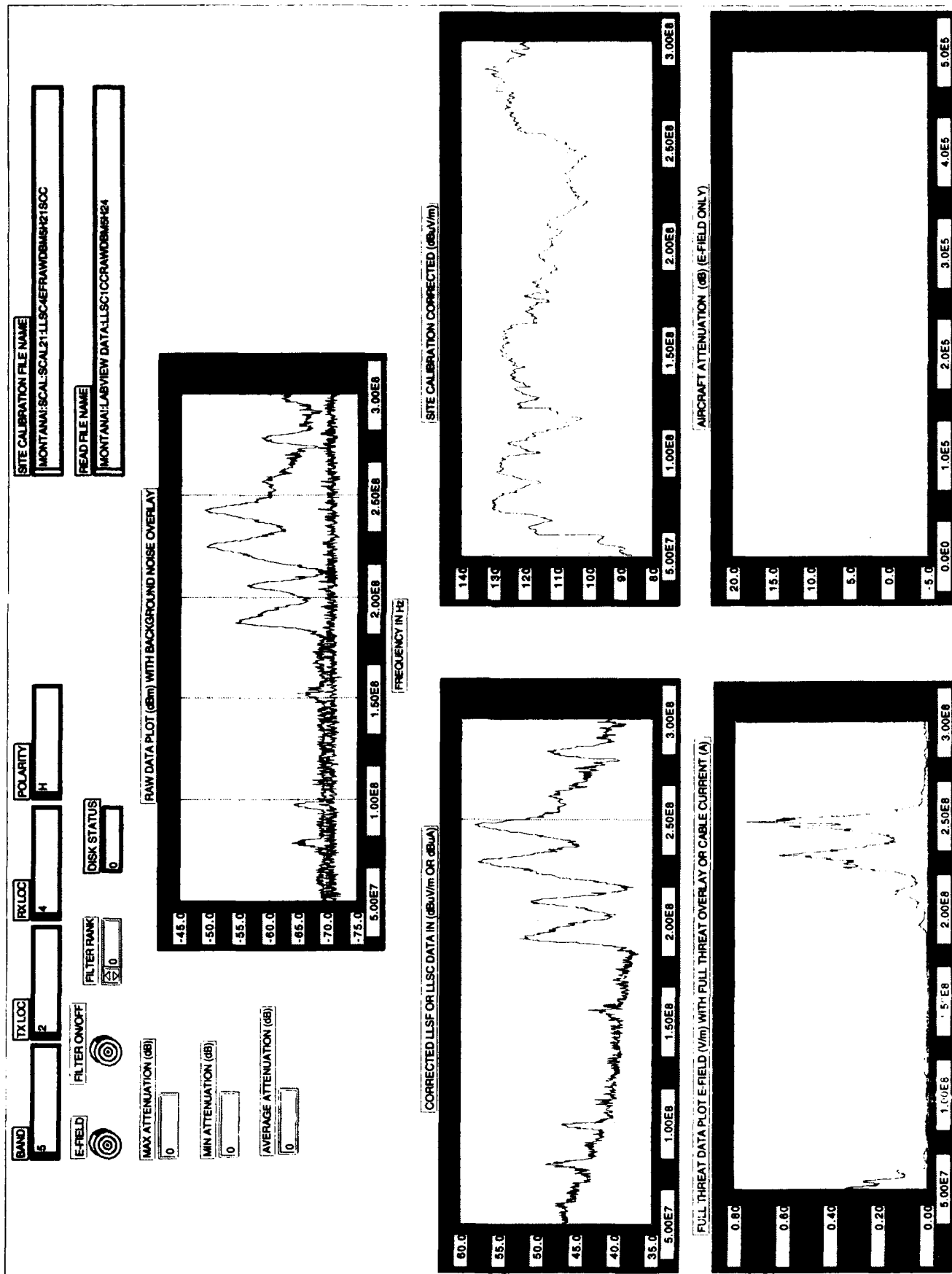
READ FILE NAME
MONTANA:LABVIEW DATA:LLSC:CCRAWDBM3H24

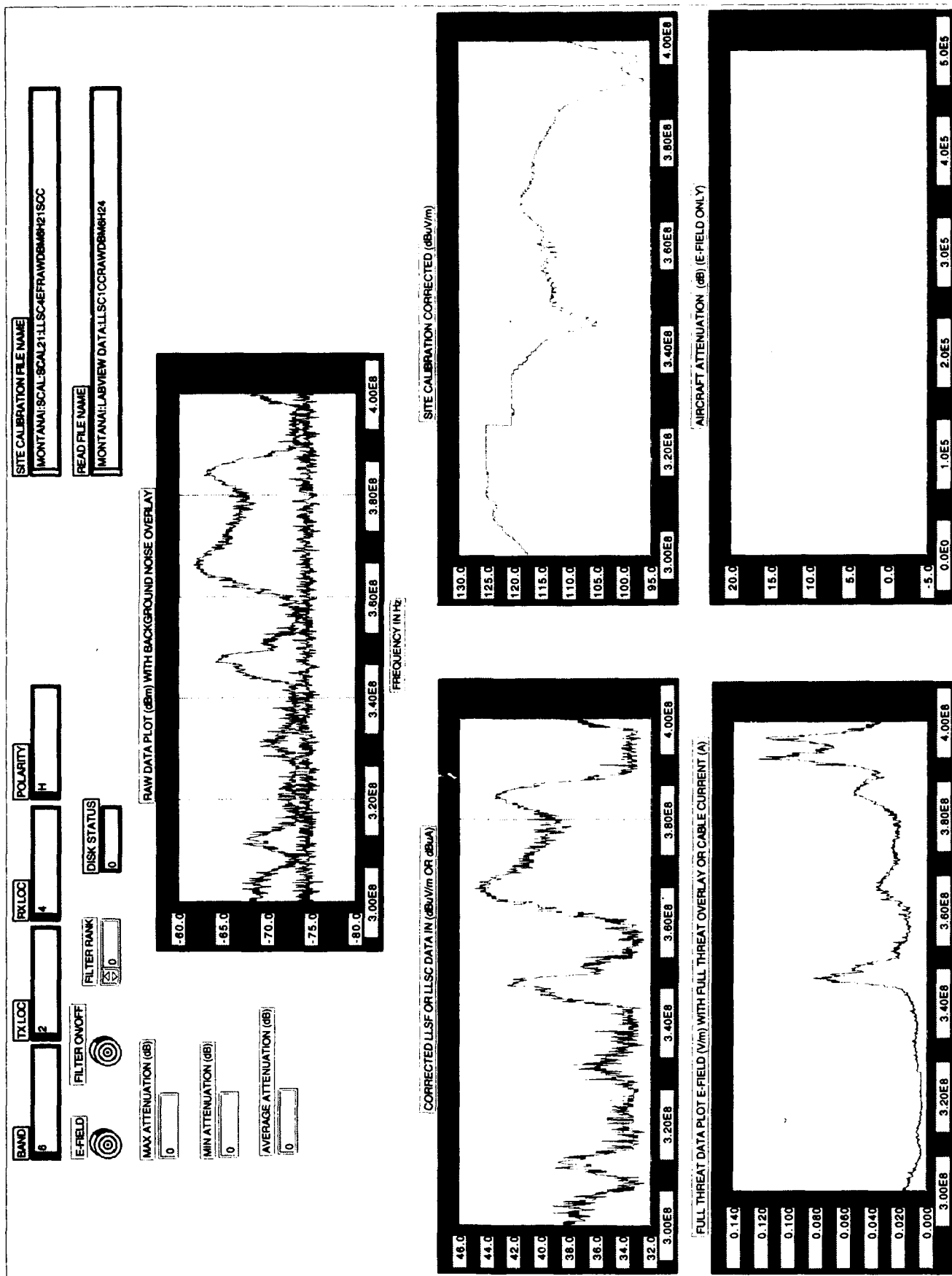
BAND 3 TX LOC 2 RX LOC 4 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 0 DSK STATUS 0









BAND
TX LOC
RX LOC
POLARITY

E-FIELD ☒
DISK STATUS

MAX ATTENUATION (dB)
MIN ATTENUATION (dB)
AVERAGE ATTENUATION (dB)

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

SITE CALIBRATION FILE NAME

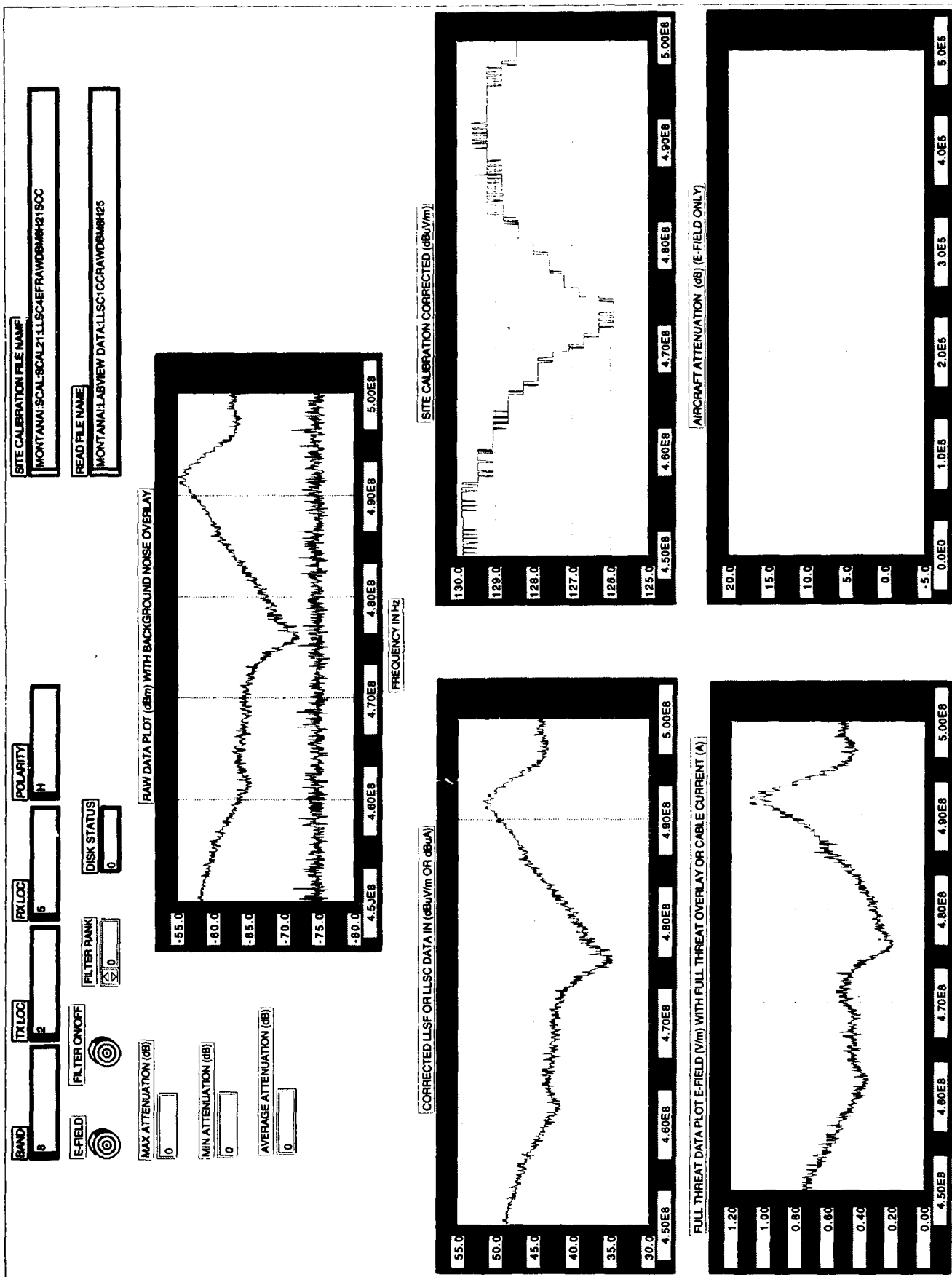
READ FILE NAME

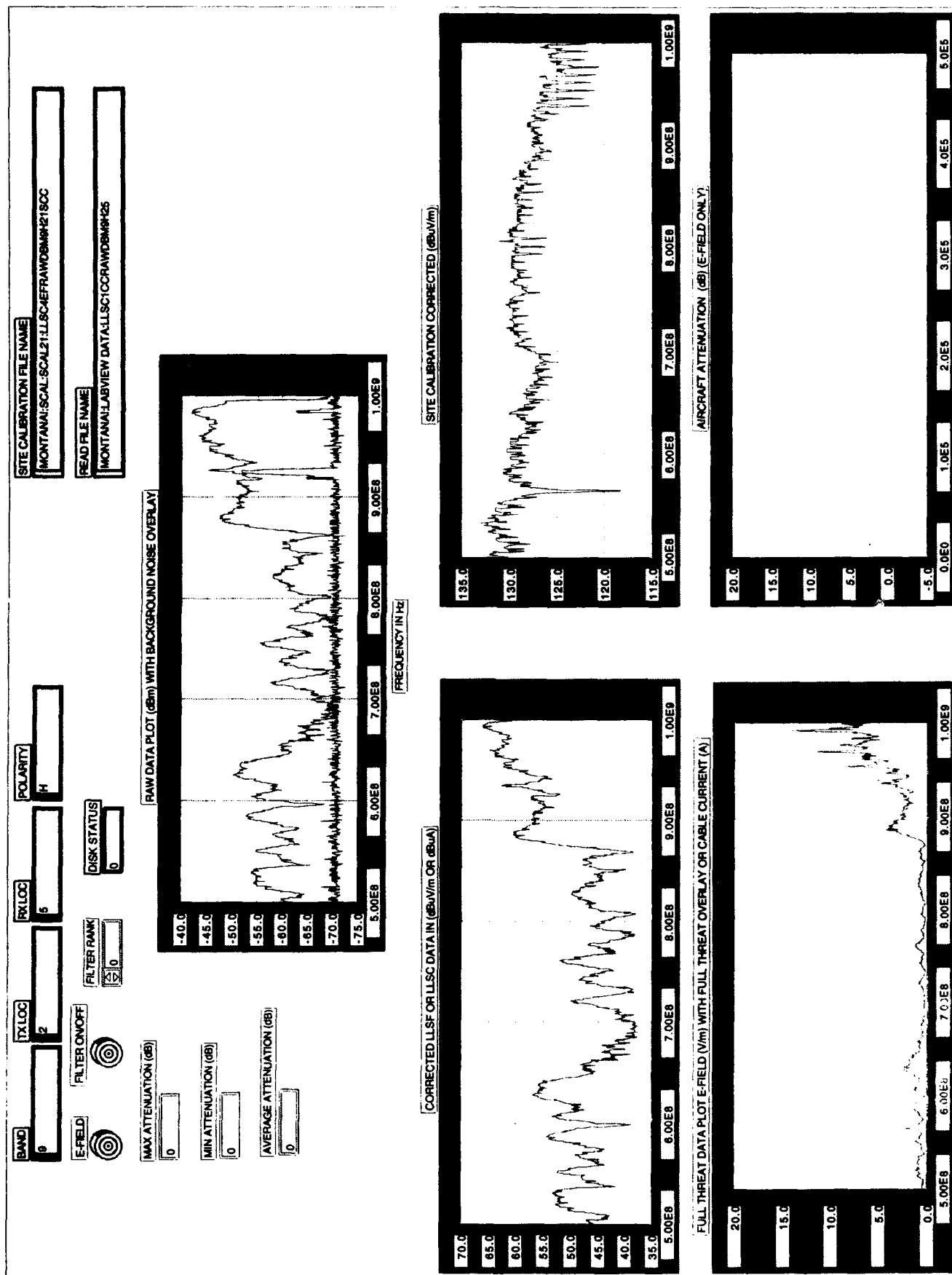
CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)

SITE CALIBRATION CORRECTED (dBuV/m)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)





SECTION 2-4
FIRE SENSOR LLSC DATA PLOTS

BAND

1

TX LOC

1

RX LOC

5

POLARITY

H

SITE CALIBRATION FILE NAME

MONTANA:SCAL-SCAL211LLSC4FRANWDBM1H21SOC

E-FIELD

FILTER ON/OFF

MAX ATTENUATION (dB)

0

DISK STATUS

0

FILTER RANK

0

READ FILE NAME

MONTANA:LABVIEW DATA:LLSC:CCRANWDBM1H15

MIN ATTENUATION (dB)

0

AVERAGE ATTENUATION (dB)

0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)

SITE CALIBRATION CORRECTED (dBuV/m)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

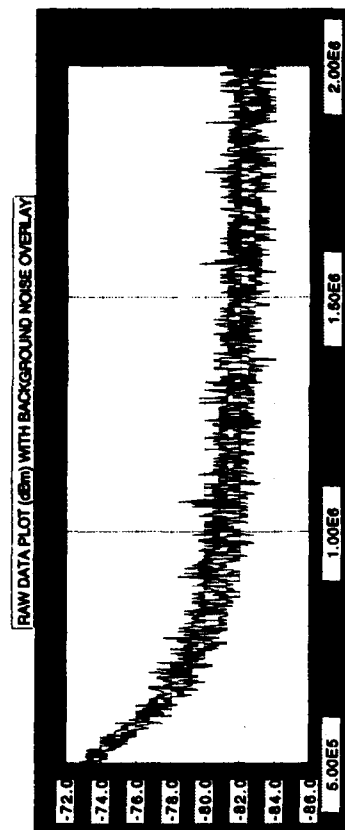
100

SITE CALIBRATION FILE NAME
MONTANAUSCAL:SCAL211LLSC4FRW06M2H150C

READ FILE NAME
MONTANAUSLABVIEW DATA:LLSC1CCRAW06M2H15

BAND 2 TX LOC 1 RX LOC 6 POLARITY H

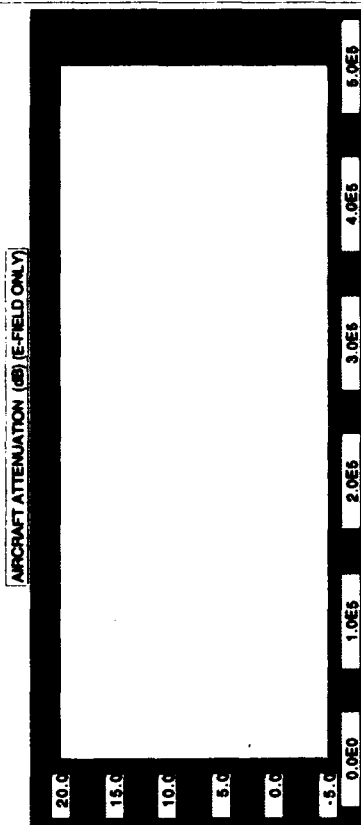
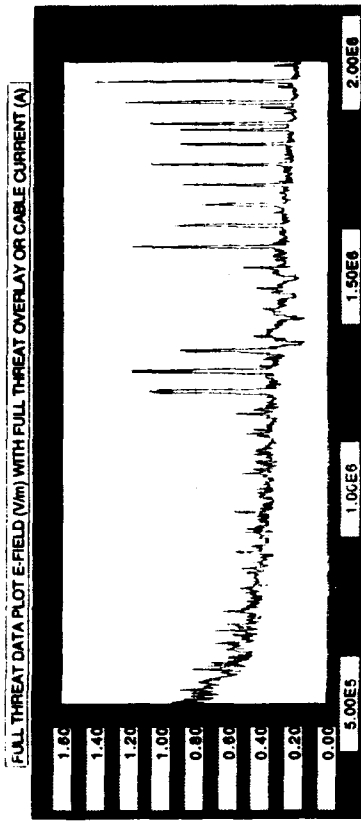
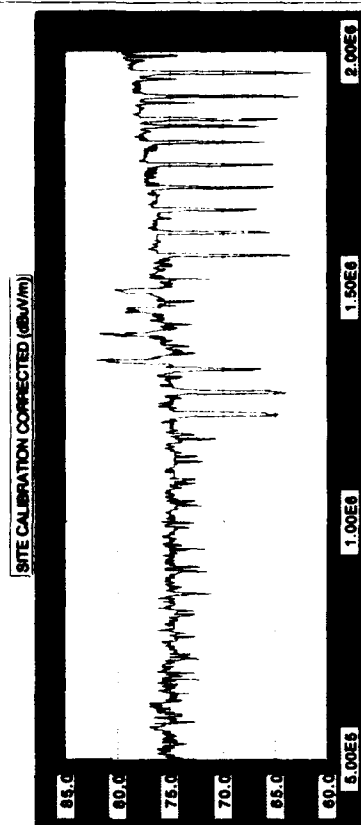
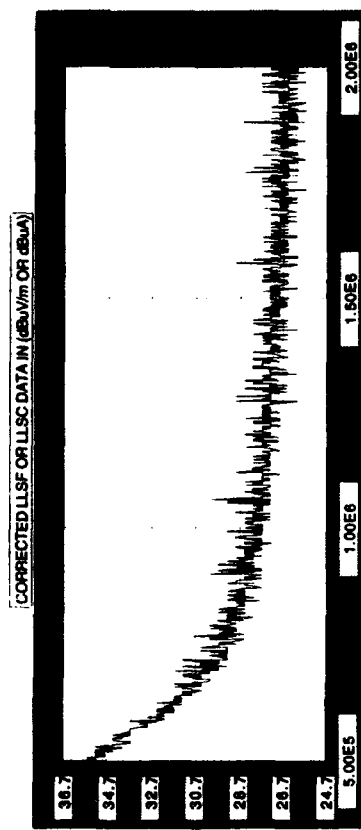
E-FIELD FILTER QW/OFF FILTER RANK 2/0 DISK STATUS 0



MAX ATTENUATION (dB) 0

MIN ATTENUATION (dB) 0

AVERAGE ATTENUATION (dB) 0



SITE CALIBRATION FILE NAME
MONTANA:SCAL:SCAL21:LLSC4EFTAWDBMS421BCC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC1COCRAWDBMS4SH16

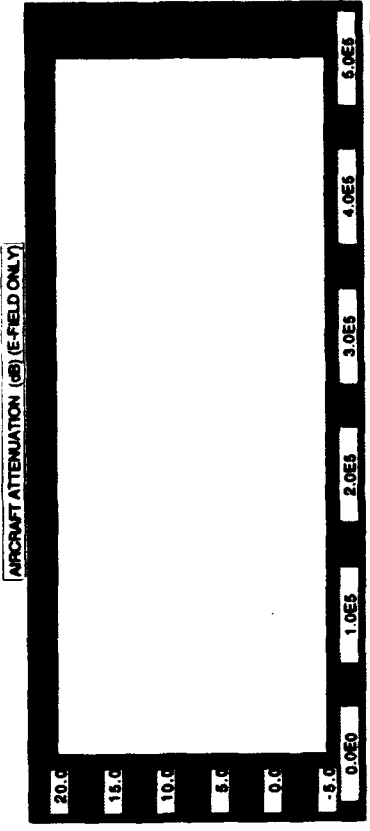
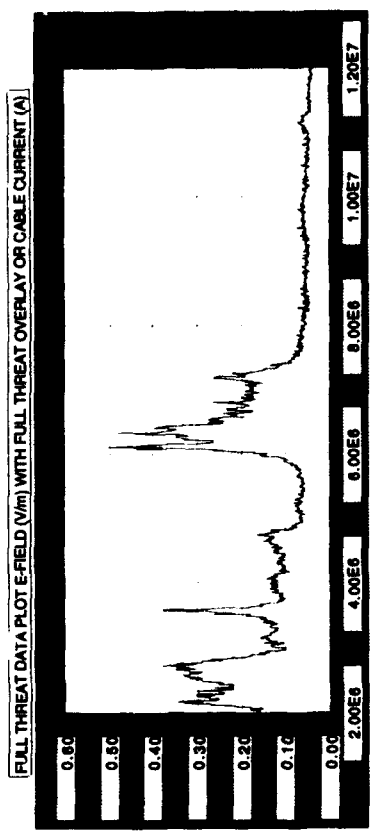
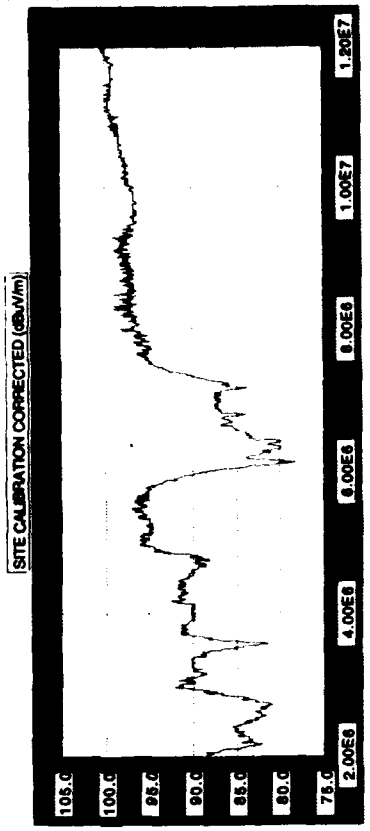
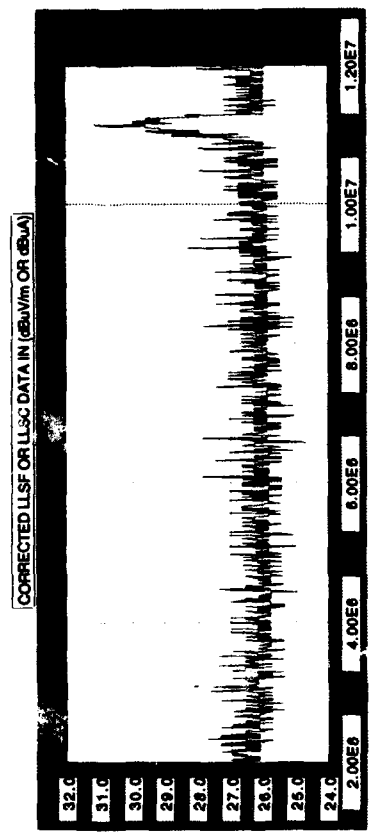
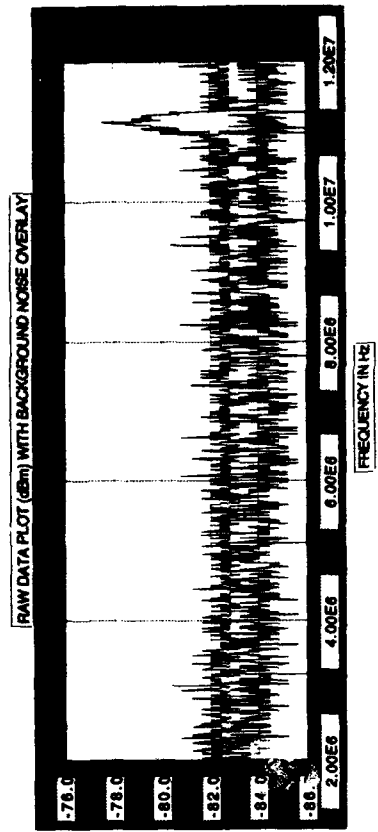
BAND 3 TX LOC 1 RX LOC 6 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 2 DISK STATUS 0

MAX ATTENUATION (dB) 0

MIN ATTENUATION (dB) 0

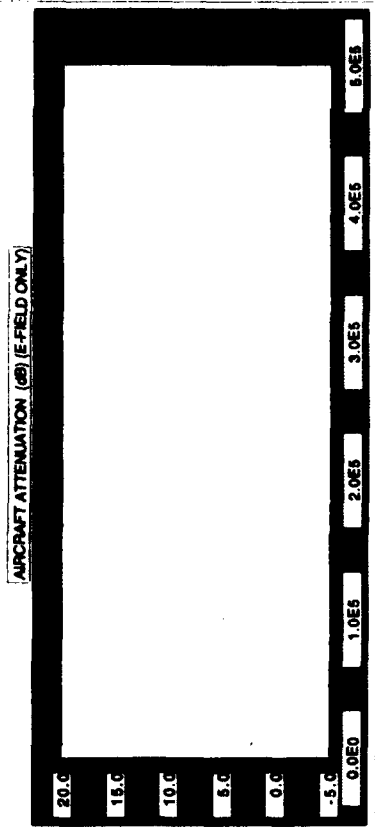
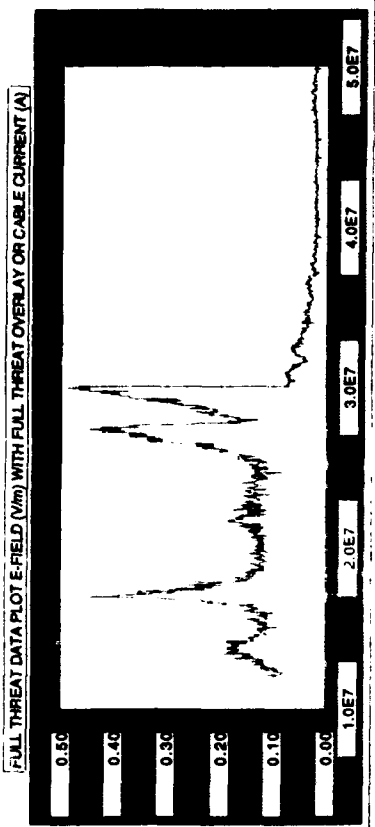
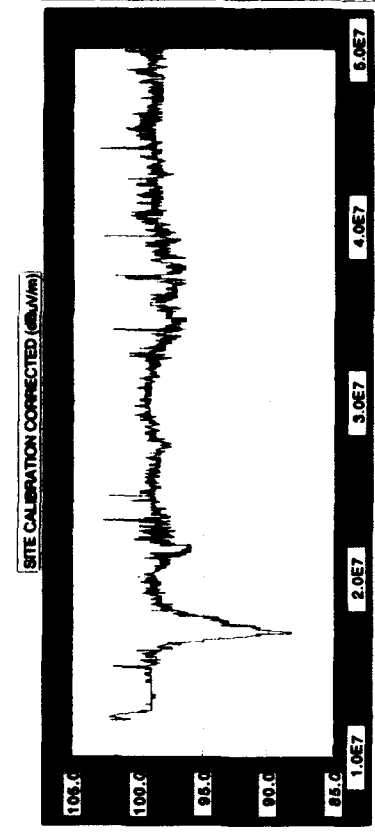
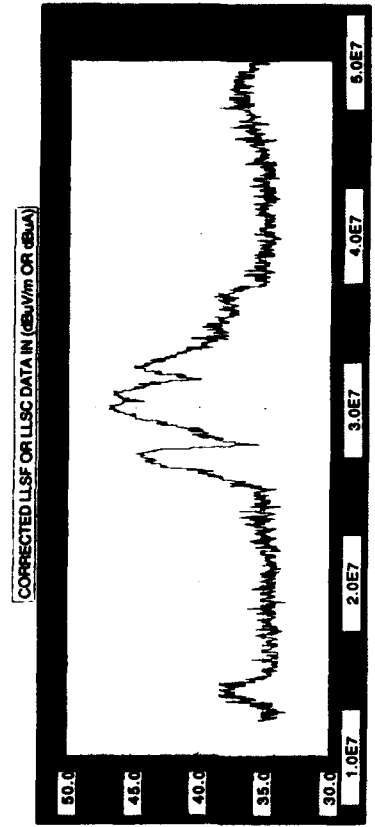
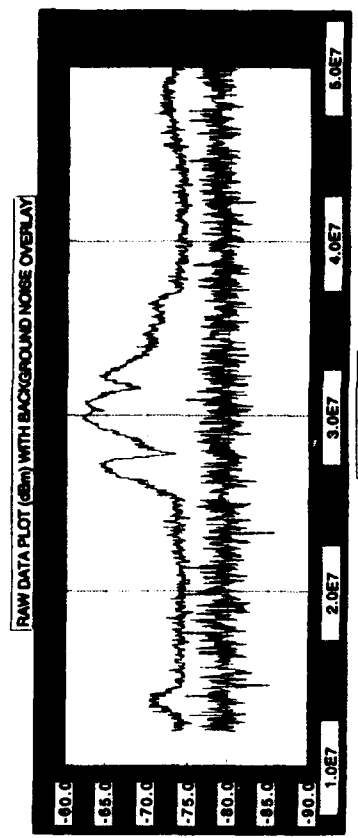
AVERAGE ATTENUATION (dB) 0



SITE CALIBRATION FILE NAME
 MONTANA:SCAL:1111SC:REFRANDBM:42180C
 READ FILE NAME
 MONTANA:LASVIEW DATA:11SC:100RAWDBM:4115

SMC 4 TX LOC 1 RX LOC 5 POLARITY N
 E-FIELD FILTER ON/OFF FILTER RANK 30 DISK STATUS 0

MAX ATTENUATION (dB) 0
 MIN ATTENUATION (dB) 0
 AVERAGE ATTENUATION (dB) 0



BAND

E-FIELD ☒

MAX ATTENUATION (dB)

MIN ATTENUATION (dB)

AVERAGE ATTENUATION (dB)

TX LOC

FILTER ON/OFF ☒

PR LOC

DISK STATUS

POLARITY

FILTER RANK

SITE CALIBRATION FILE NAME

READ FILE NAME

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

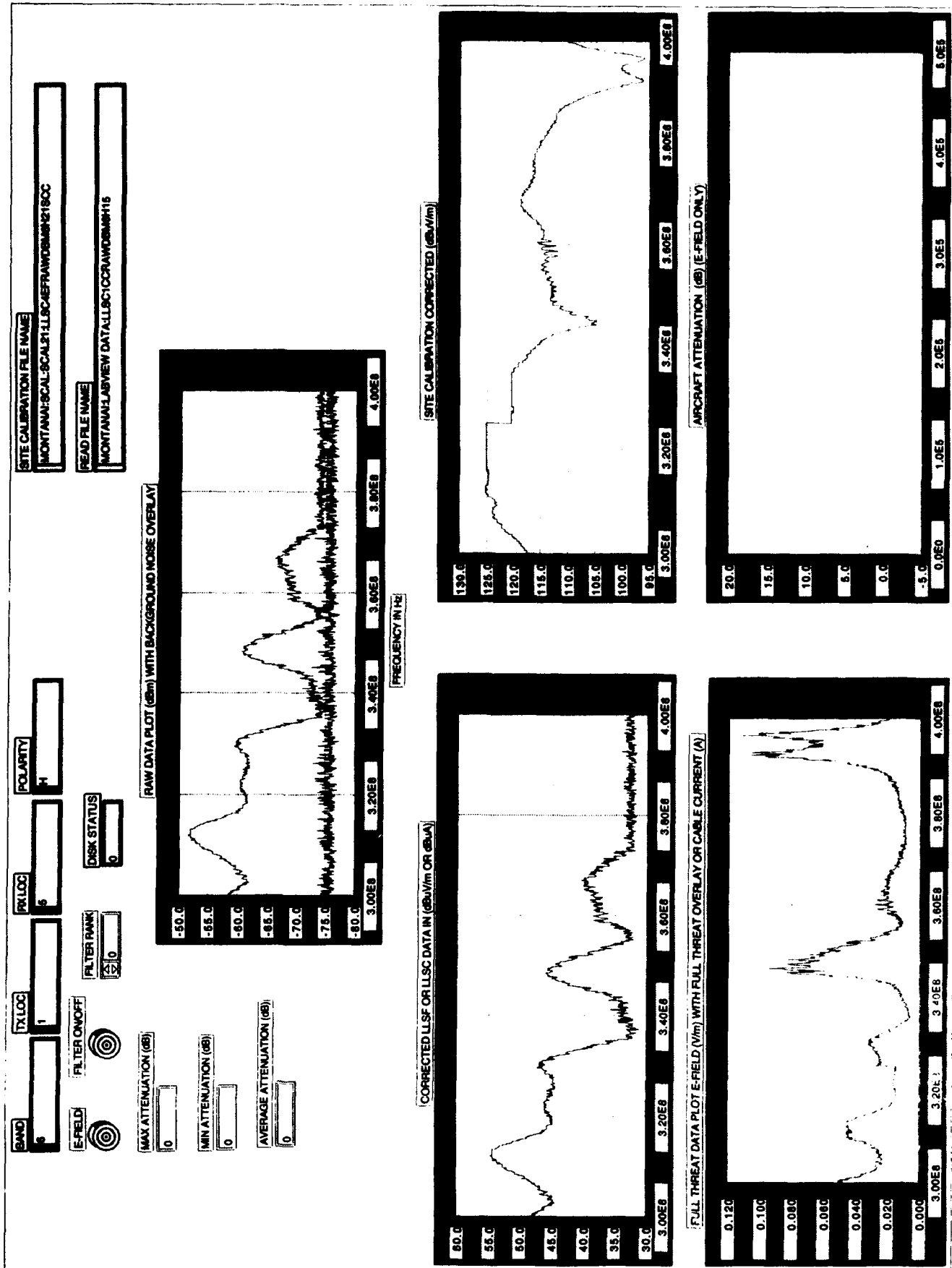
FREQUENCY IN Hz

CORRECTED LLSC OR LLSC DATA IN (dBuV/m OR dBuA)

SITE CALIBRATION CORRECTED (dBuV/m)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



SITE CALIBRATION FILE NAME
MONTANA1SCALSCAL311LSCAFRANWDM7H2180C

READ FILE NAME
MONTANA1ASVIEW DATA11SC1CORAWDM7H14

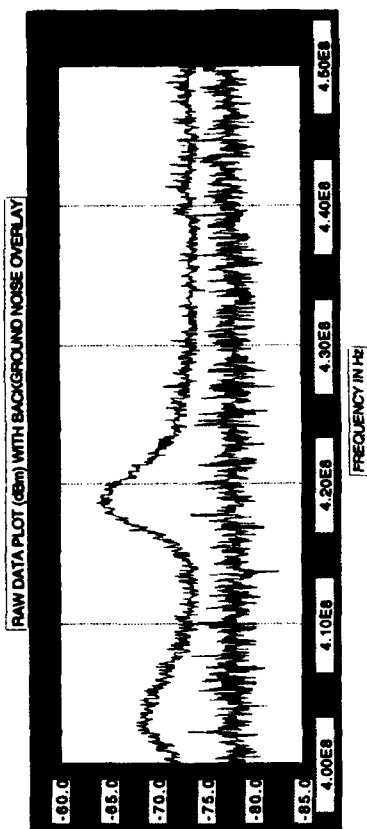
BAND 7 TX LOC 1 RX LOC 4 POLARITY H

E-FIELD ☒ FILTER ON/OFF ☒ FILTER RANK 2 DISK STATUS 0

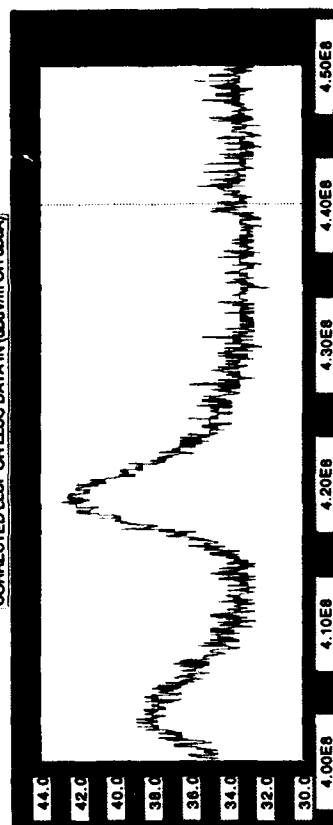
MAX ATTENUATION (dB) 0

MIN ATTENUATION (dB) 0

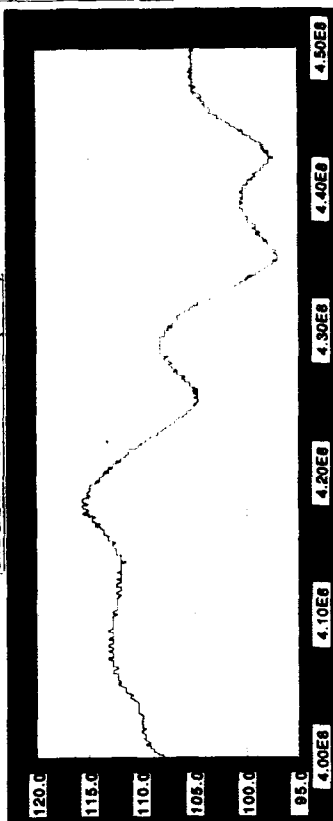
AVERAGE ATTENUATION (dB) 0



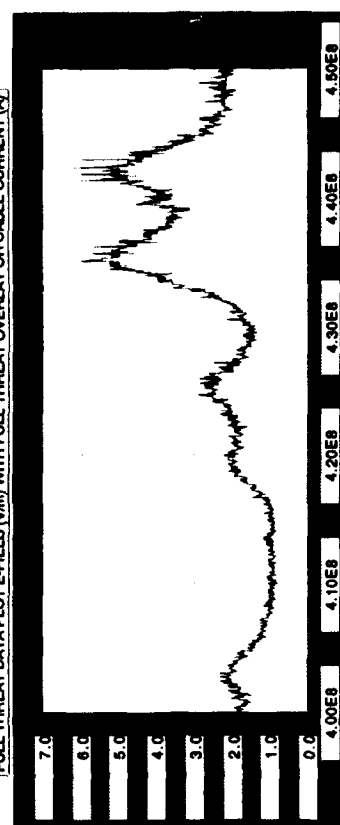
CORRECTED LLSF OR LISC DATA IN (dBuV/m OR dBuA)



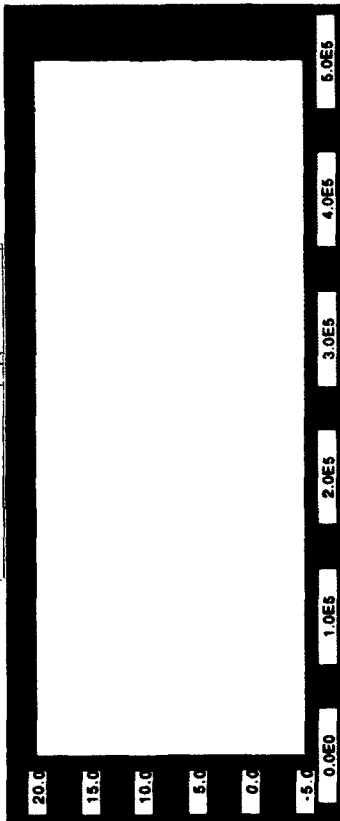
SITE CALIBRATION CORRECTED (dBuV/m)



FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)



AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



Site Calibration File Name: MONTANA:SCAL:SCAL211LSC4EFRAWDSM42180C
Read File Name: MONTANA:LABVIEW DATA:LLSC1CCRAWDSM42180C

POLARITY: H
TX LOC: 1
RX LOC: 4
FILTER RANK: 0
DISK STATUS: 0
E-FIELD: ☒
FILTER ON/OFF: ☒

MAX ATTENUATION (dB): 0
MIN ATTENUATION (dB): 0
AVERAGE ATTENUATION (dB): 0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

CORRECTED ILLSC OR LLSC DATA IN (dBuV/m OR dBuA)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

SITE CALIBRATION CORRECTED (dBuV/m)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

SITE CALIBRATION FILE NAME
MONTANA:SCAL-SCAL211LSC4FRANDBM1H21SOC

READ FILE NAME
MONTANA:LABVIEW DATA:LLSC1CCRAWDBM1H25

POLARITY
H

TX LOC
2

FX LOC
5

DISK STATUS
0

MAX ATTENUATION (dB)
0

MIN ATTENUATION (dB)
0

AVERAGE ATTENUATION (dB)
0

RAW DATA PLOT (dBm) WITH BACKGROUND NOISE OVERLAY

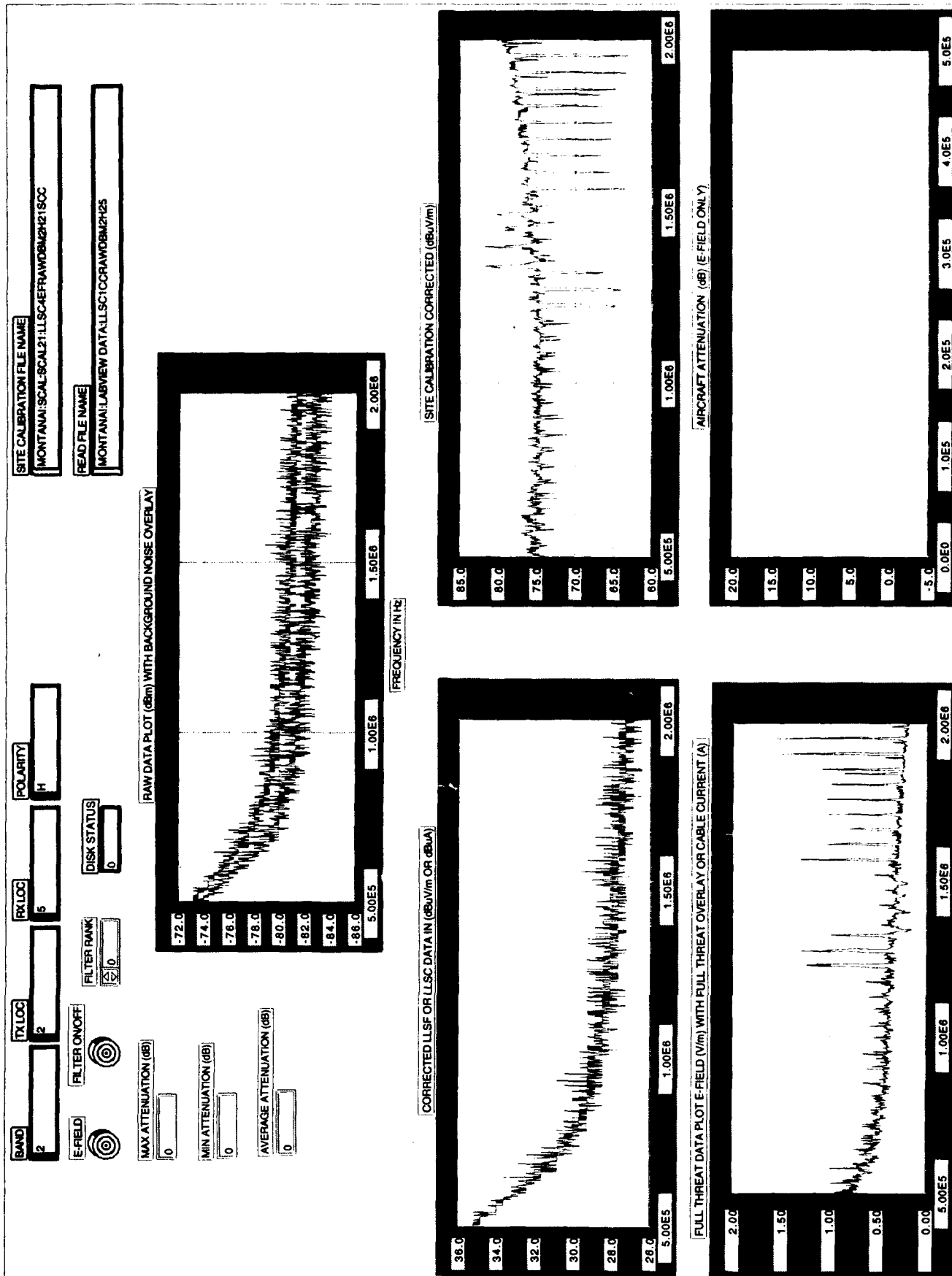
FREQUENCY IN Hz

SITE CALIBRATION CORRECTED (dBuV/m)

CORRECTED ILSF OR ILSF DATA IN (dBuV/m OR dBuA)

FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)



SITE CALIBRATION FILE NAME
MONTANA/SCAL/SCAL21/LLSC4EFRAME08M3H2180C

READ FILE NAME
MONTANA/LLABVIEW/DATA/LLSC10CRAN08M3H25

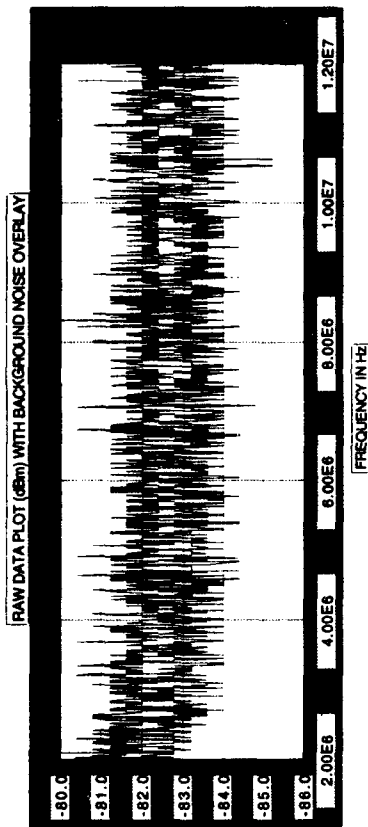
SAND 3 TX LOC 2 RX LOC 6 POLARITY H

E-FIELD FILTER ON/OFF FILTER RANK 10 DISK STATUS 0

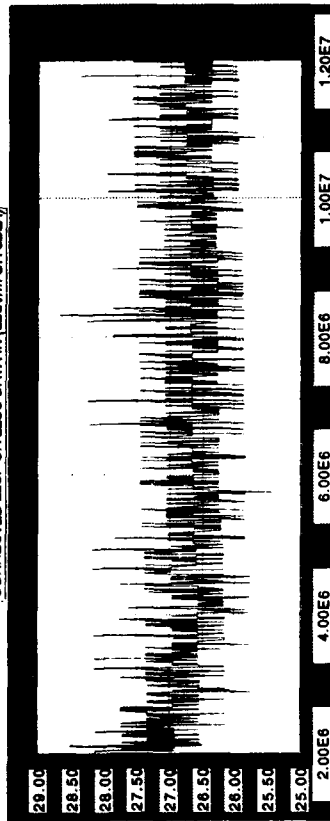
MAX ATTENUATION (dB) 0

MIN ATTENUATION (dB) 0

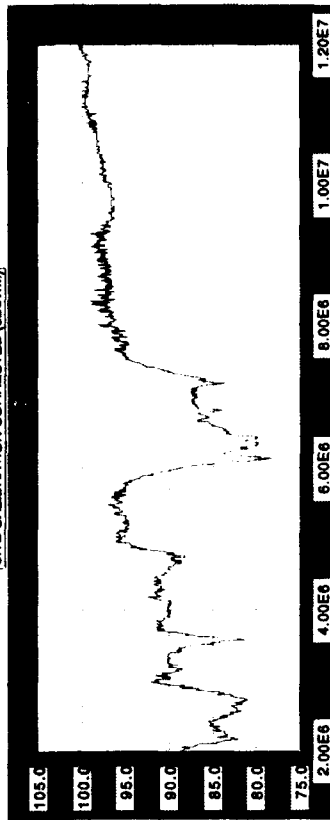
AVERAGE ATTENUATION (dB) 0



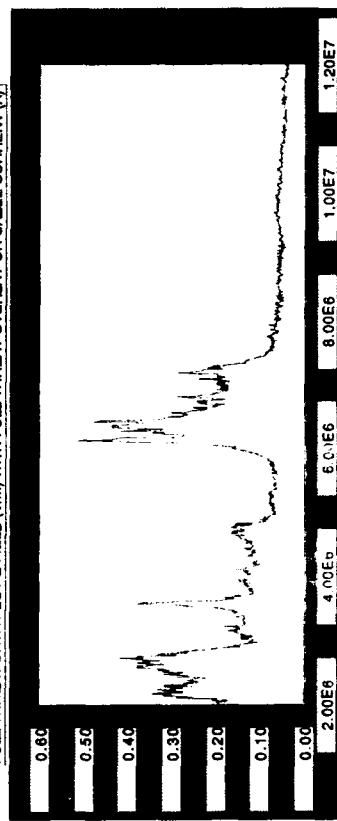
CORRECTED LLSF OR LLSC DATA IN (dBuV/m OR dBuA)



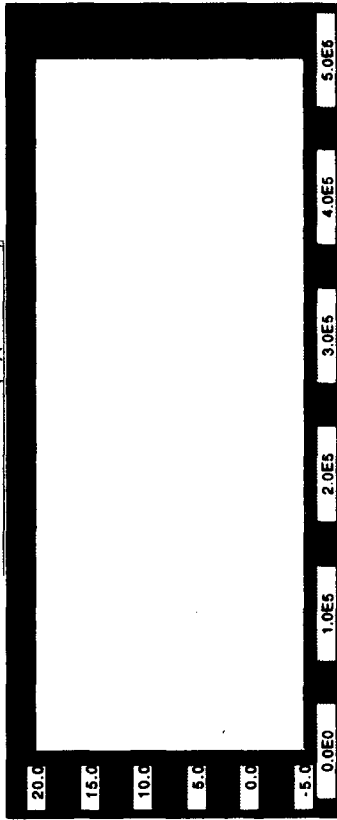
SITE CALIBRATION CORRECTED (dBuV/m)

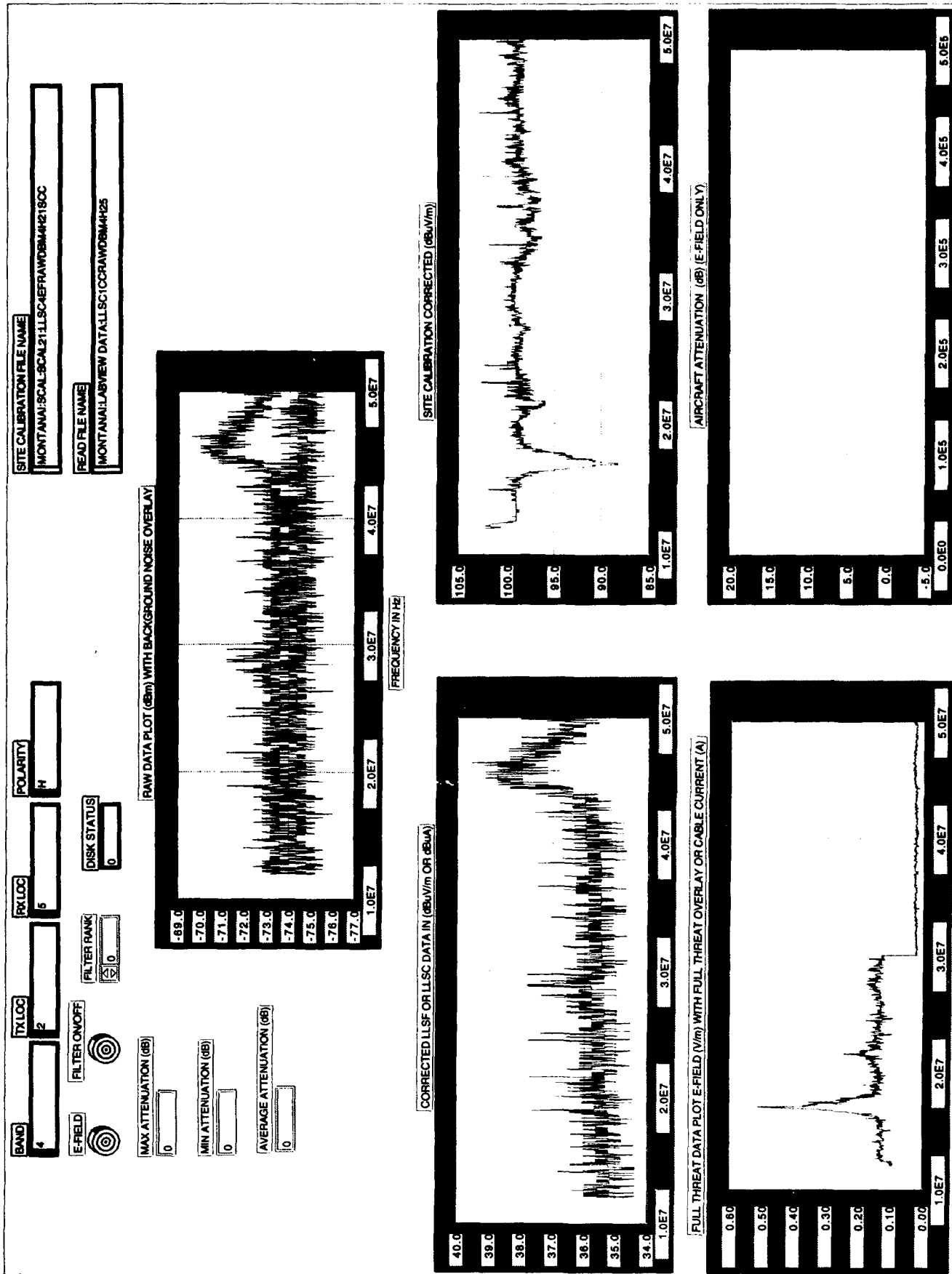


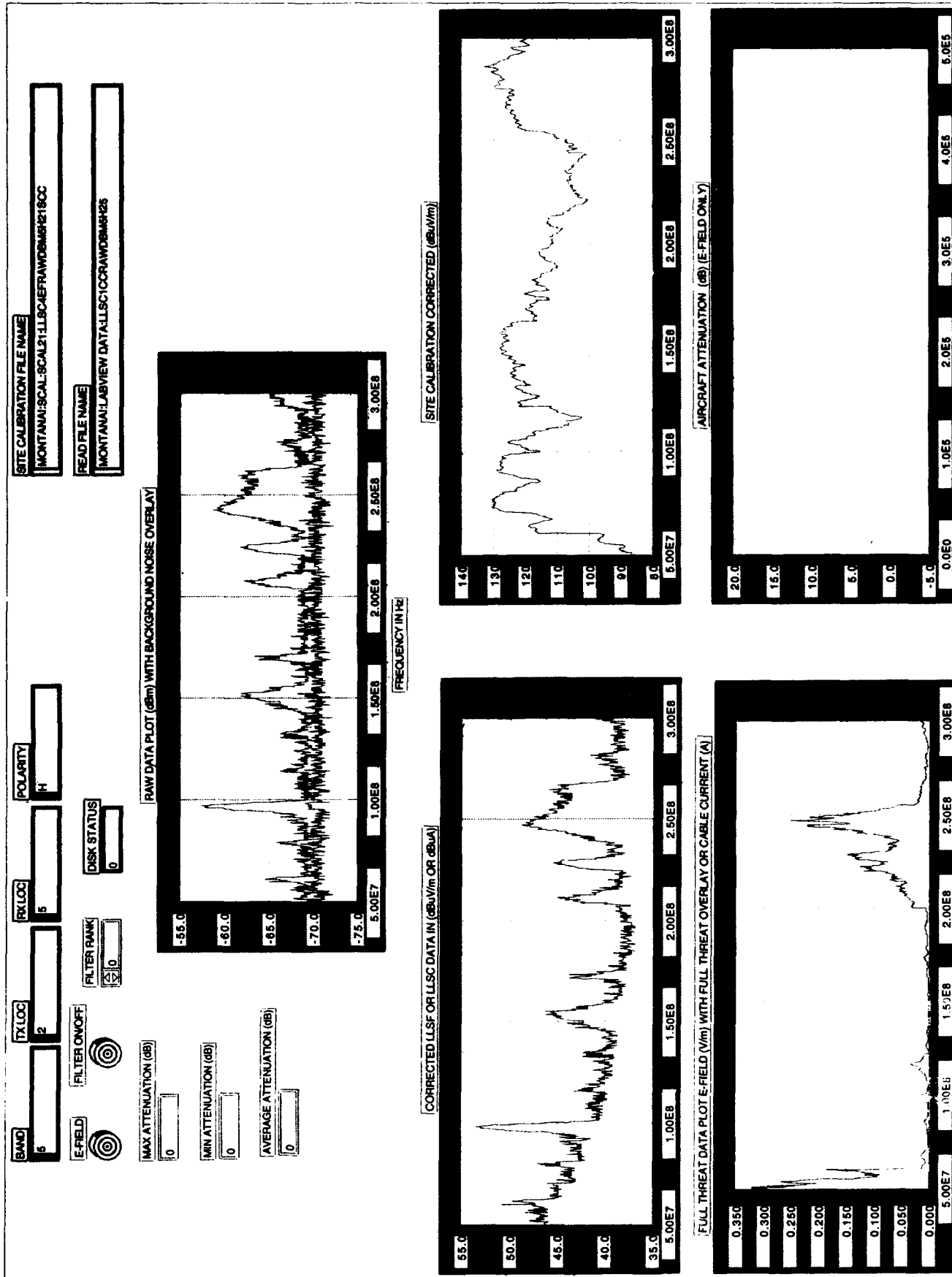
FULL THREAT DATA PLOT E-FIELD (V/m) WITH FULL THREAT OVERLAY OR CABLE CURRENT (A)

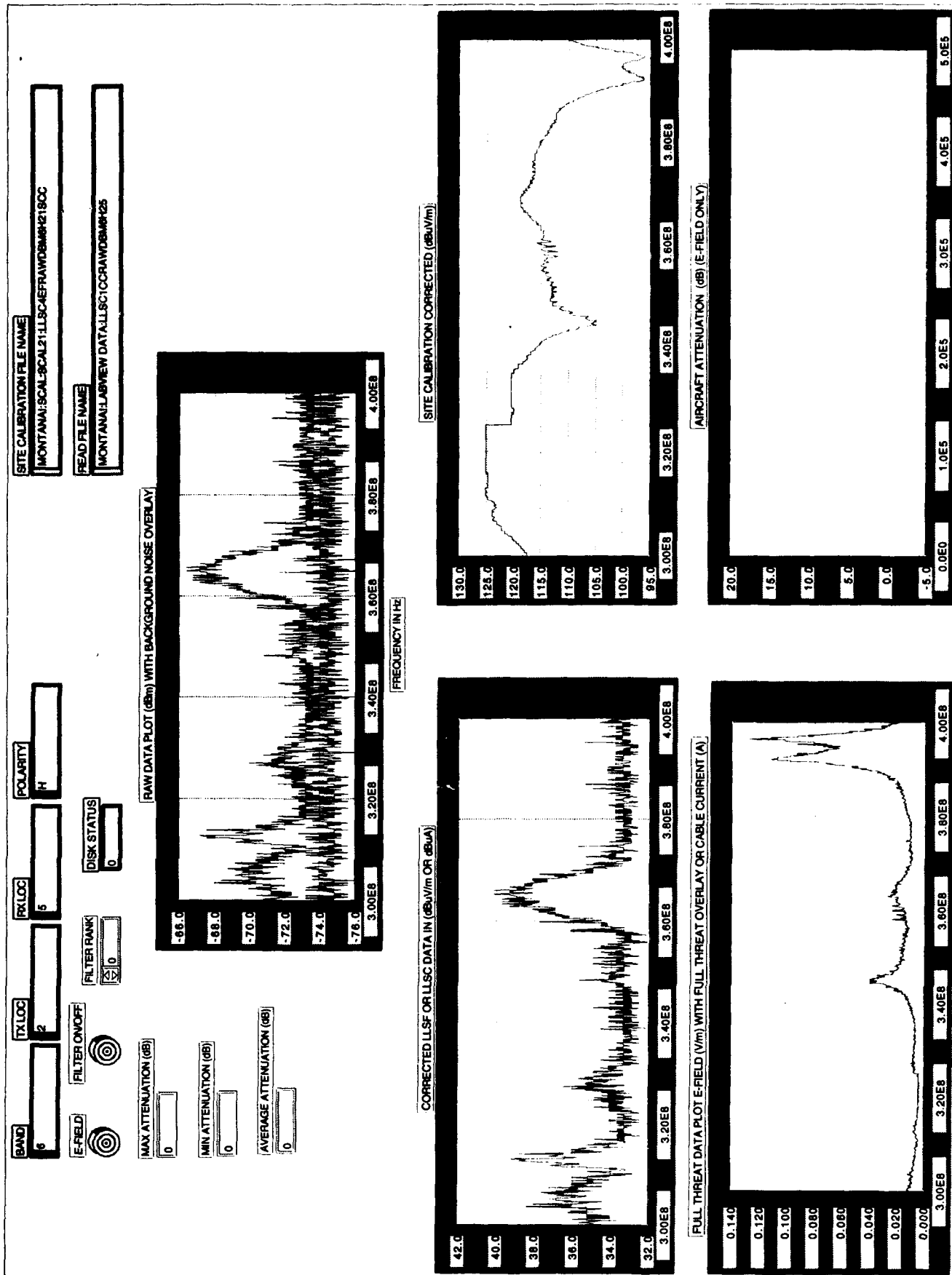


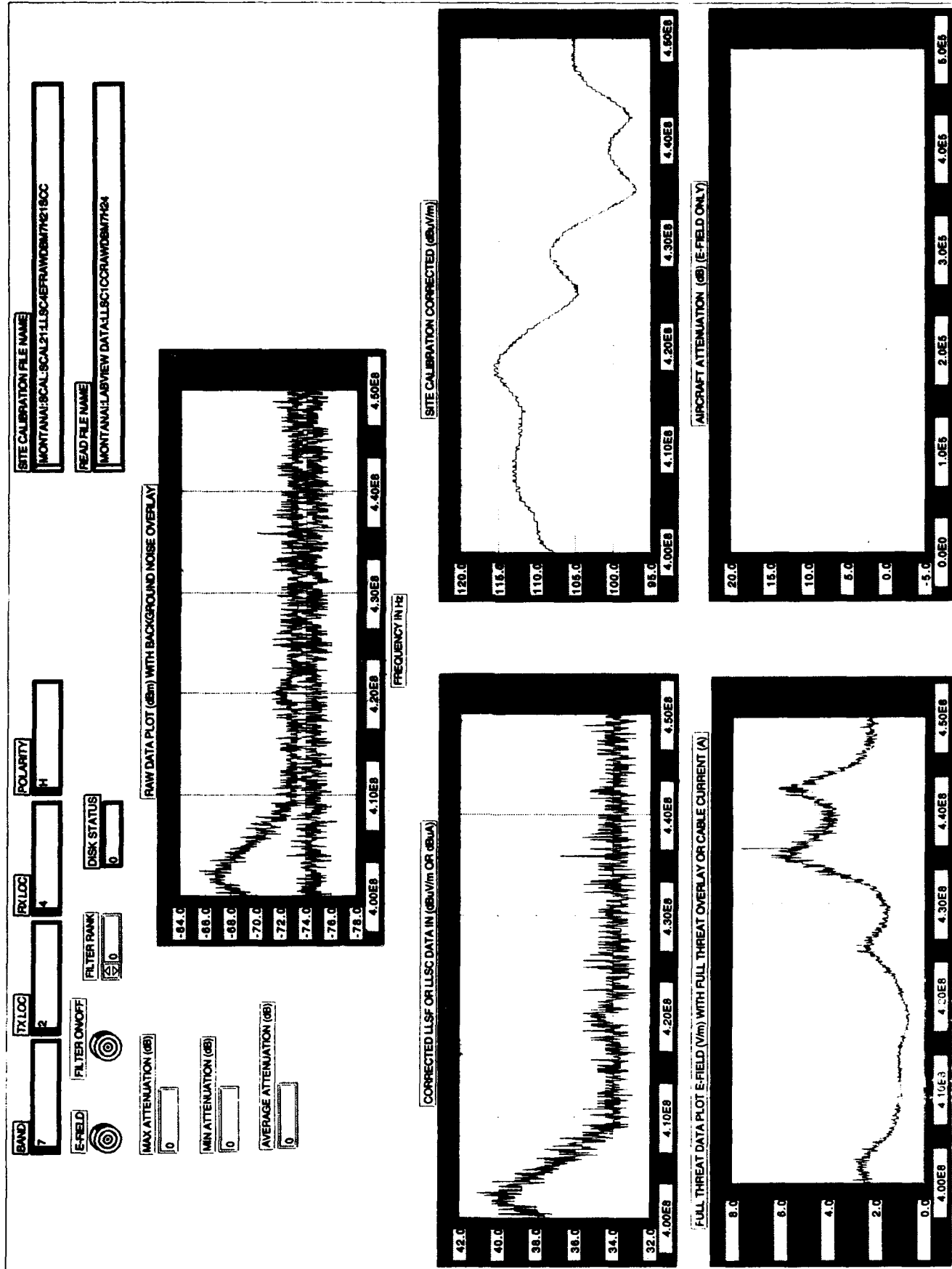
AIRCRAFT ATTENUATION (dB) (E-FIELD ONLY)

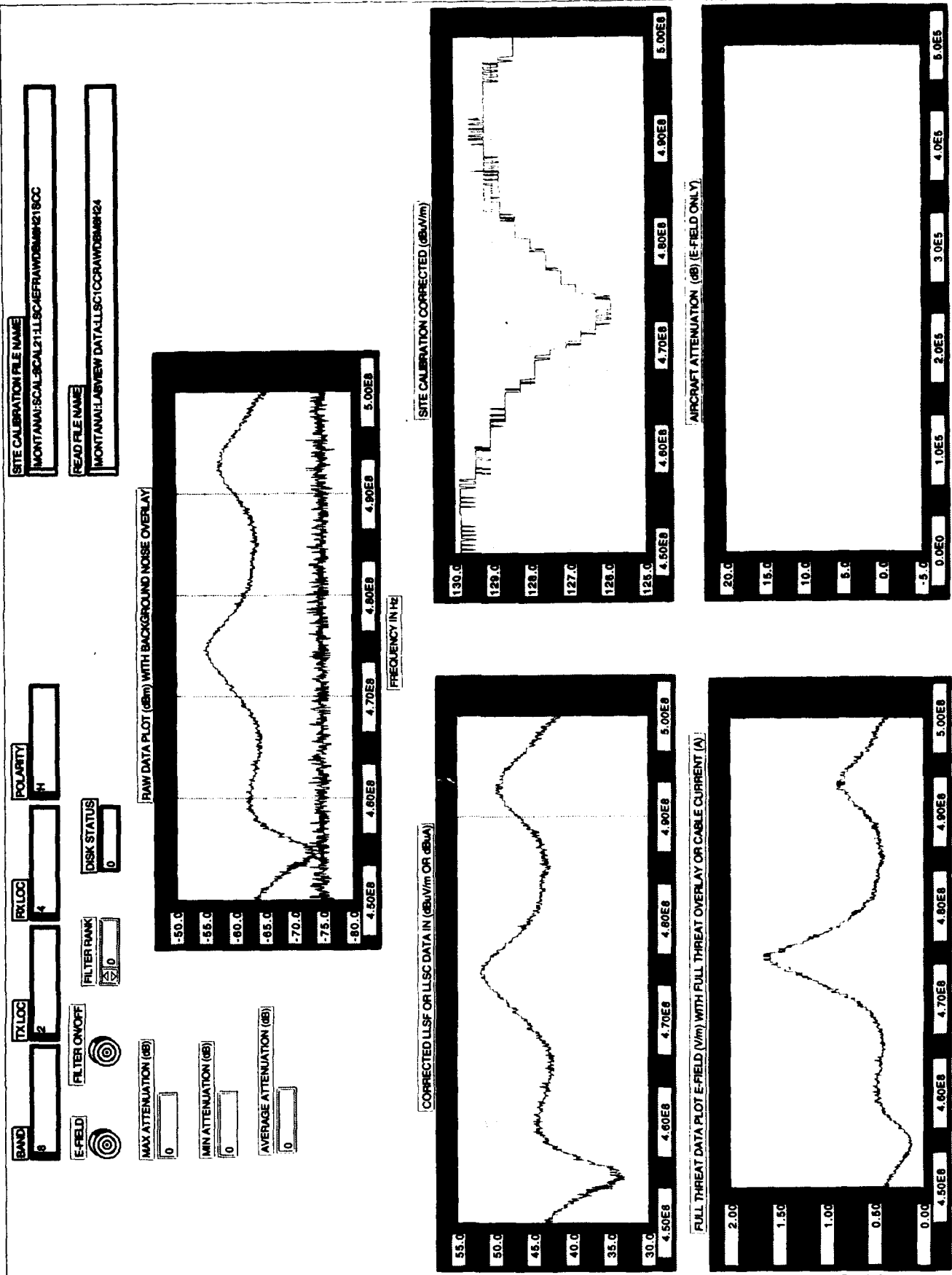










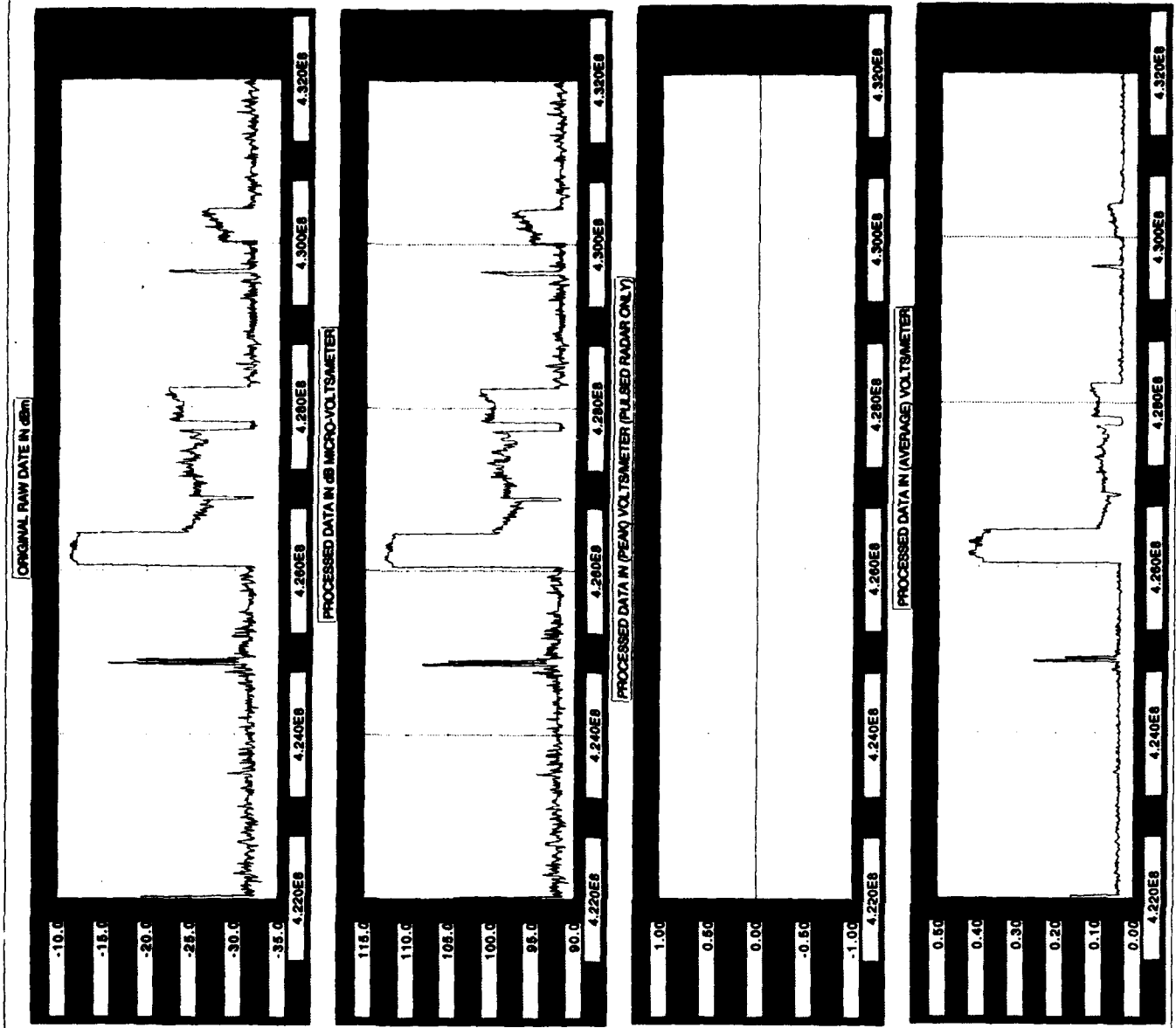


SECTION 3
FLIGHT TEST DATA PLOT DESCRIPTION

The flight test data plots (sample on the following page) each contain the following information:

- Source radar/transmitter duty cycle (DUTY CYCLE)
 - Source ERP (ERP)
 - Name of the source transmitter (RADAR NAME)
 - Receive antenna factor for source frequency range (ANTENNA FACTOR)
 - Approximate range from the transmitter (RANGE)
 - S-76 altitude during test (ALTITUDE)
 - Approximate radius from the transmitter (RADIUS)
 - File name of the stored data (DATA FILE NAME)
 - Calculated expected peak E-Field level in V/m (ESTIMATED E-FIELD LEVEL (PEAK) V/m)
 - Calculated expected average E-Field level for, **pulsed transmitters only**, in V/m.
 - Original flight test Data Plot in dBm (ORIGINAL RAW DATA PLOT IN dBm)
 - Corrected data plot in dBuV/m (PROCESSED DATA IN dB MICRO-VOLTS/METER)
 - Original data converted to peak E-Field level data plot, **pulsed transmitters only**, in V/m (PROCESSED DATA IN (PEAK) VOLTS/METER)
 - Original data converted to average E-Field level in V/m data plot (PROCESSED DATA IN (AVERAGE) VOLTS/METER)
-

SECTION 3-1
PAVE PAWS DATA PLOTS



DUTY CYCLE 10.00

RADAR NAME PAWPAWS

RANGE (M) 10580

ALTITUDE (M) 2000

ANTENNA FACTOR (dB) 16.8

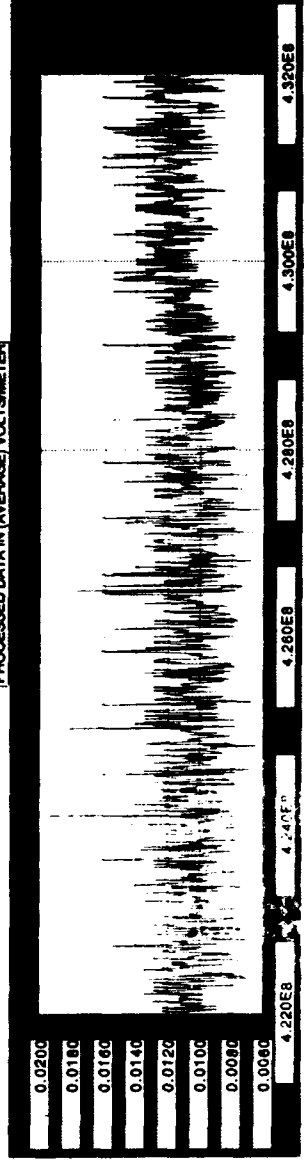
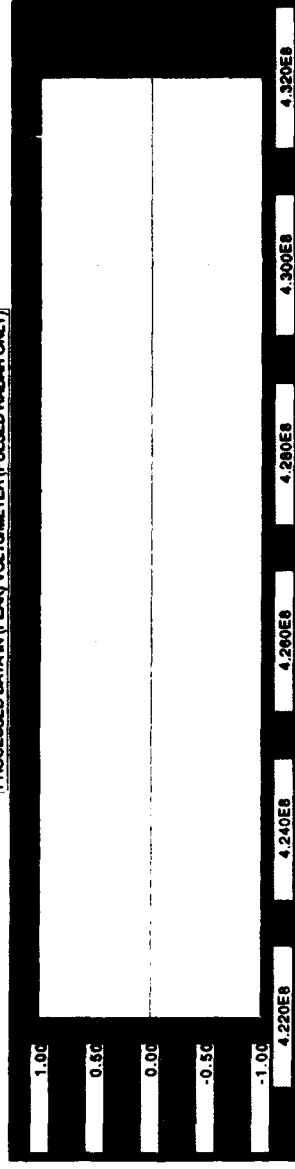
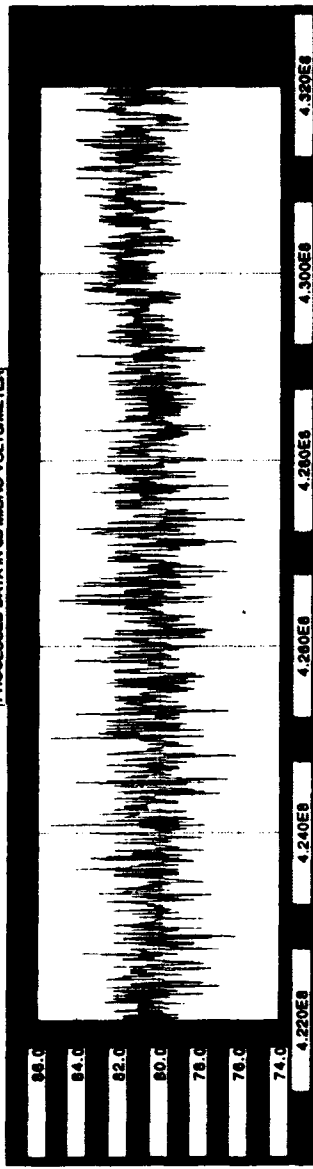
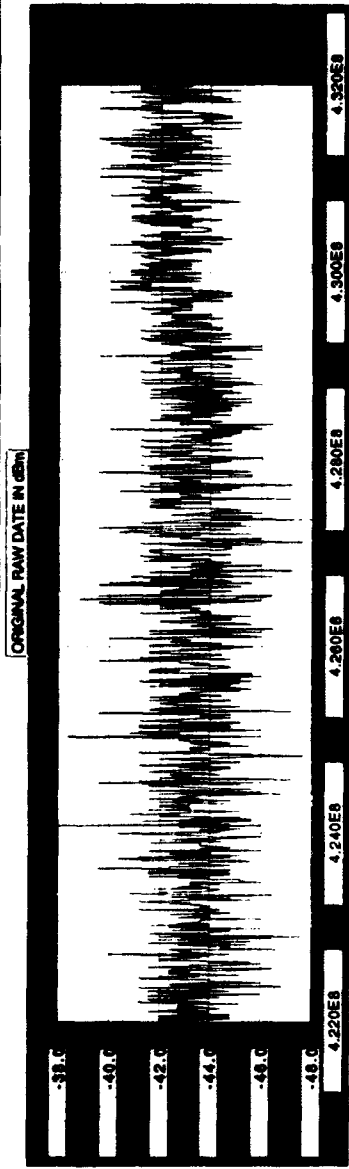
DISK ERROR 0.00

RADIUS (M) 10747.75

DATA FILE NAME MONTANA.FLYBYDATA.PAWPAWSR10580A2000

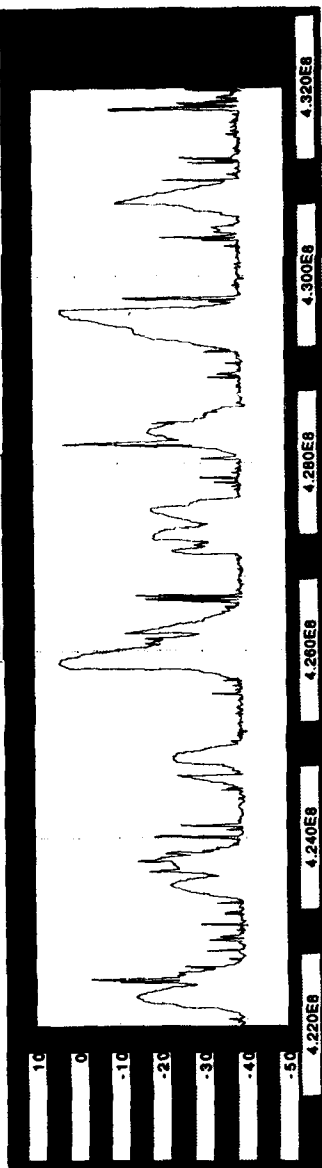
ESTIMATED E-FIELD LEVEL (PEAK) V/M 0.00

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M 0.00

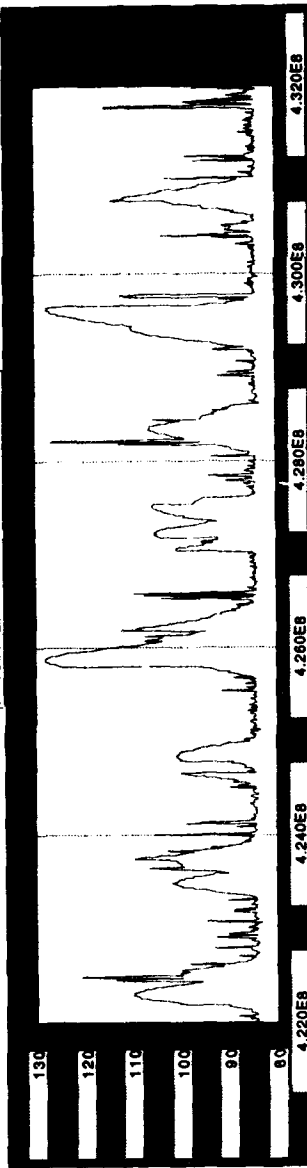


DUTY CYCLE	0.00	DISK ERROR	0.00
RADAR NAME	PAVEPAWS	ANTENNA FACTOR (dB)	16.8
RANGE (N)	9280	ALTITUDE (N)	1000
		RADIUS (N)	5373.88
DATA FILE NAME			
MONTANA:FLYBYDATA:PAVEPAWSR5290A1000			
ESTIMATED E-FIELD LEVEL (PEAK) V/M		12.18	
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M		0.00	

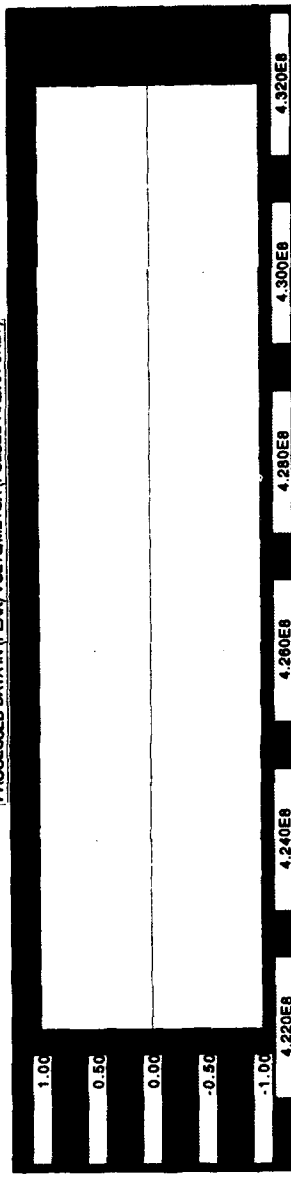
ORIGINAL RAW DATE IN dBm



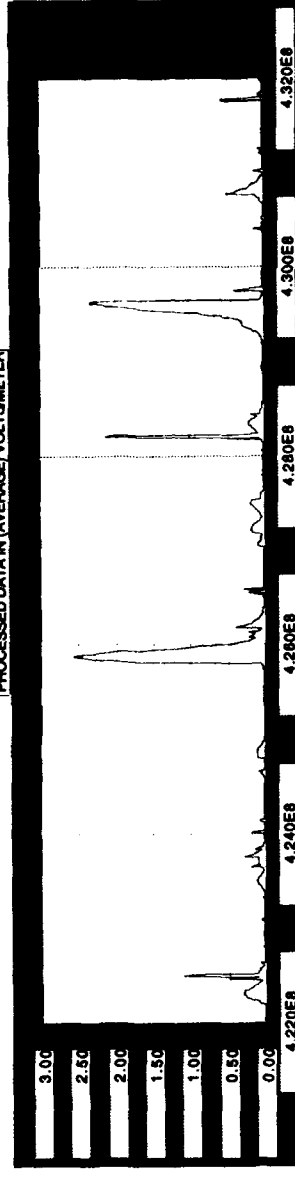
PROCESSED DATA IN dB MICRO-VOLTS/METER



PROCESSED DATA IN (PEAK) VOLTS/METER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLTS/METER



DUTY CYCLE
10.00

BPP
12.5e6

DISK ERROR
0.00

RADAR NAME
PAVEPAWS

ANTENNA FACTOR (dB)
16.8

RANGE (ft)
500

ALTITUDE (ft)
1000

RADIUS (ft)
1118.03

DATA FILE NAME

MONTANA:FLYBYDATA:PAVEPAWSR500A1000

ESTIMATED E-FIELD LEVEL (PEAK) V/M
58.53

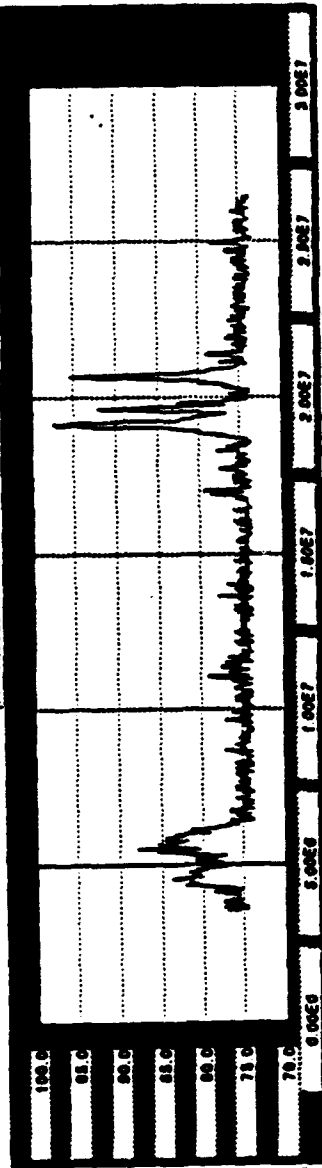
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M
0.00

SECTION 3-2
OTHB PHASE I DATA PLOTS

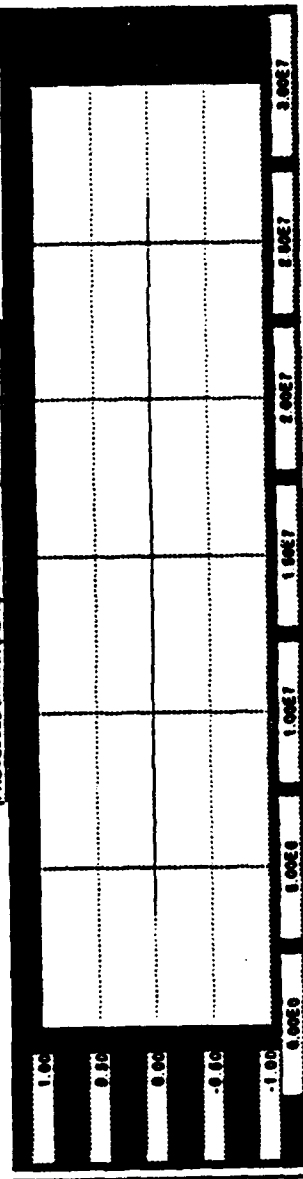
ORIGINAL RAW DATA IN GDB



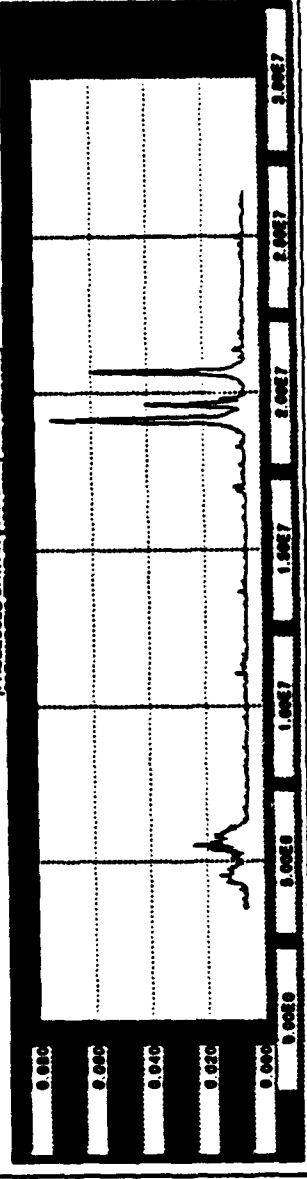
PROCESSED DATA IN MICRO-VOLTMETER



PROCESSED DATA IN PEAK VOLTMETER PULSED RADAR ONLY



PROCESSED DATA IN (AVERAGE) VOLTMETER



DUTY CYCLE
50

SPY
1518123

RADAR NAME
CIR

ANTENNA FACTOR (dB)
-6

RANGE (ft)
5000

ALTITUDE (ft)
750

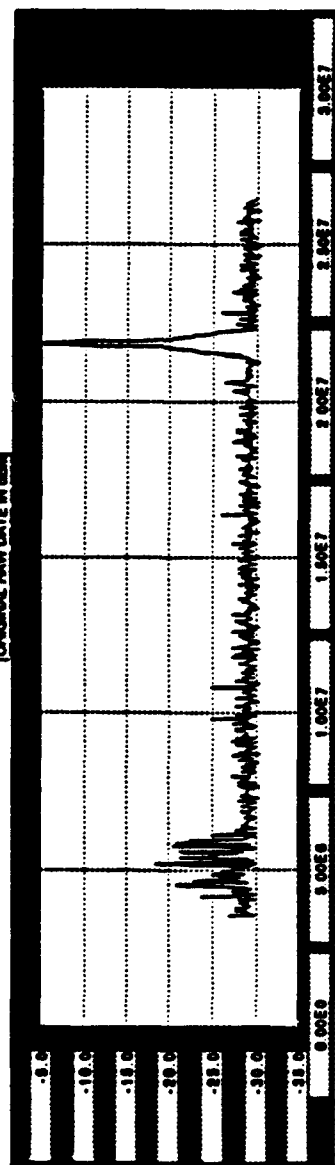
RADAR ID
1333 00

DATA FILE NAME
HARD DRIVE.FLYBYDATA OTHERS.DAT750

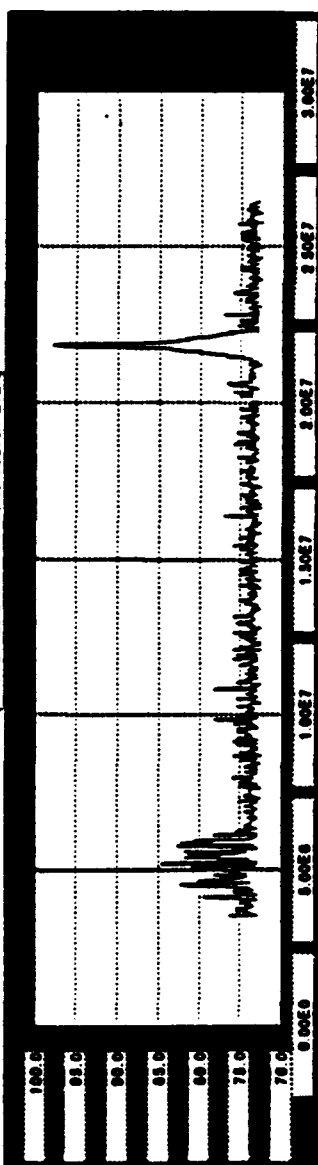
ESTIMATED E-FIELD LEVEL (PEAK V/M)
1.74

ESTIMATED E-FIELD LEVEL (AVERAGE V/M)
0.90

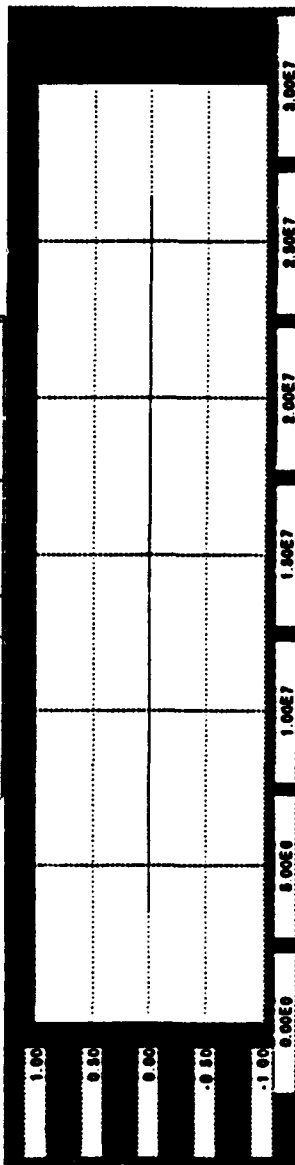
ORIGINAL RAW DATA IN GHz



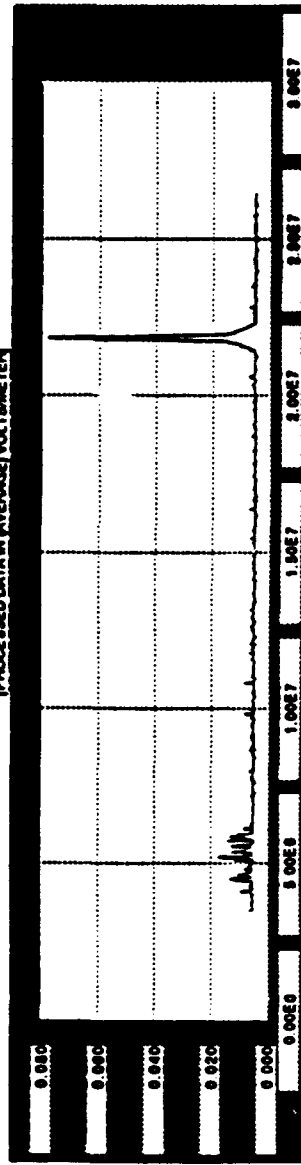
PROCESSED DATA IN dB MICROVOLT/METER



PROCESSED DATA IN PEAK VOLT/METER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLT/METER



DUTY CYCLE
0.10

SWR
1.12

RADAR NAME
OT-9

ANTENNA FACTOR (dB)
4

RANGE (m)
5200

ALTITUDE (m)
1000

RADIUS (m)
5373.00

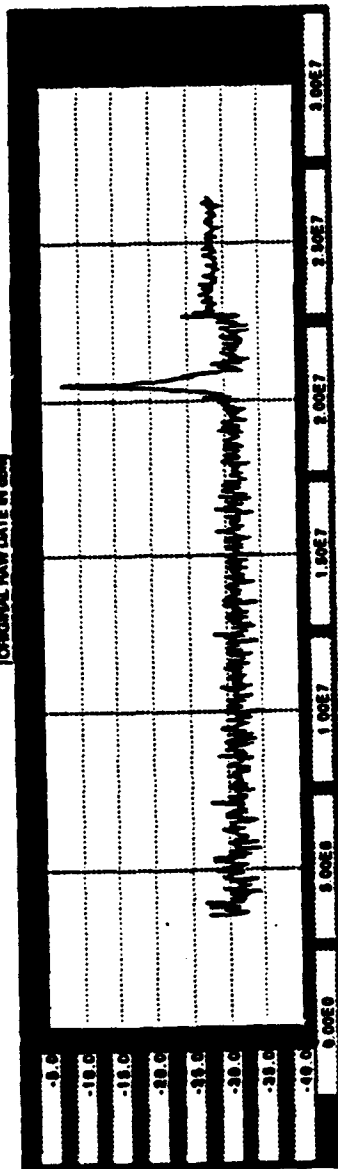
DATA FILE NAME

HARD DRIVE FL YB YDATA OT-9R0808A1000

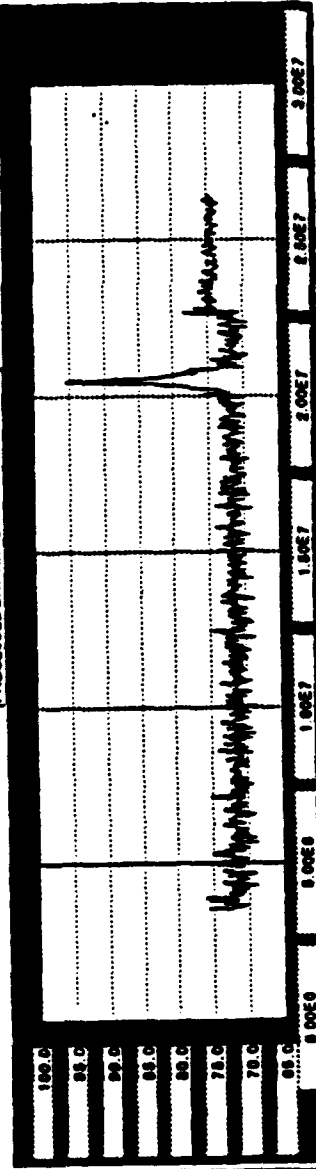
ESTIMATED E-FIELD LEVEL (PEAK) V/M
1.73

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M
0.90

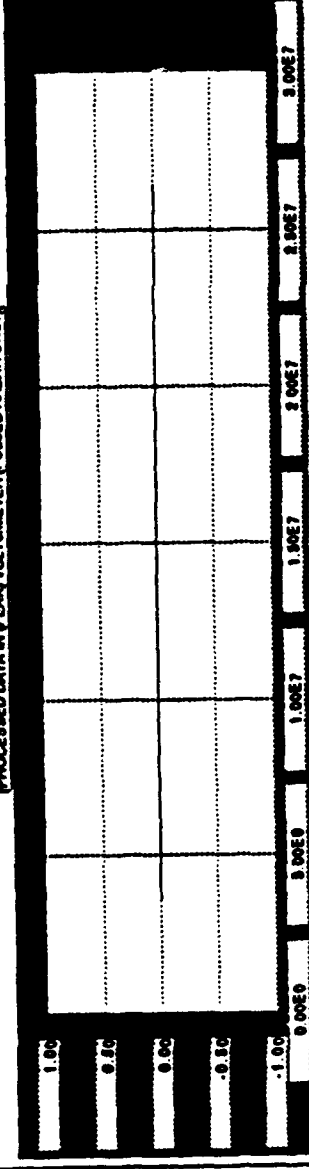
ORIGINAL RAW DATA IN GPH



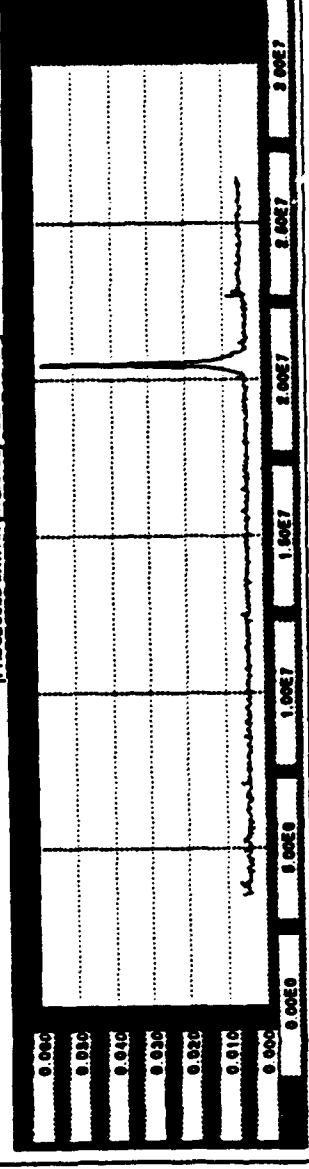
PROCESSED DATA IN GPH MICRO-VOLTMETER



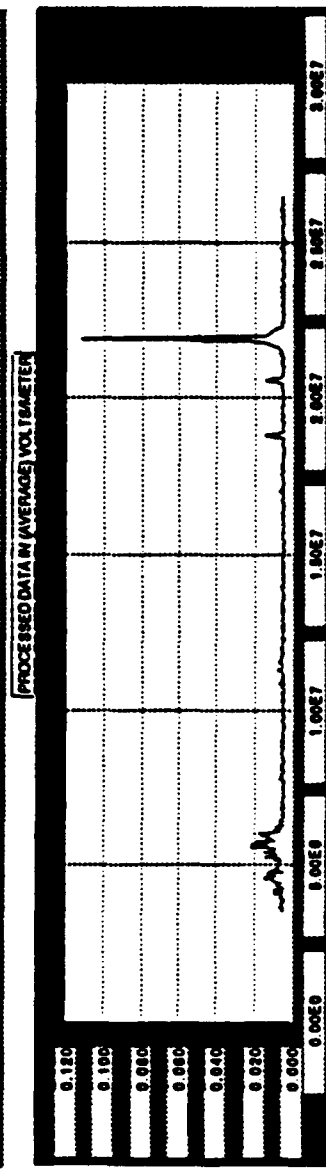
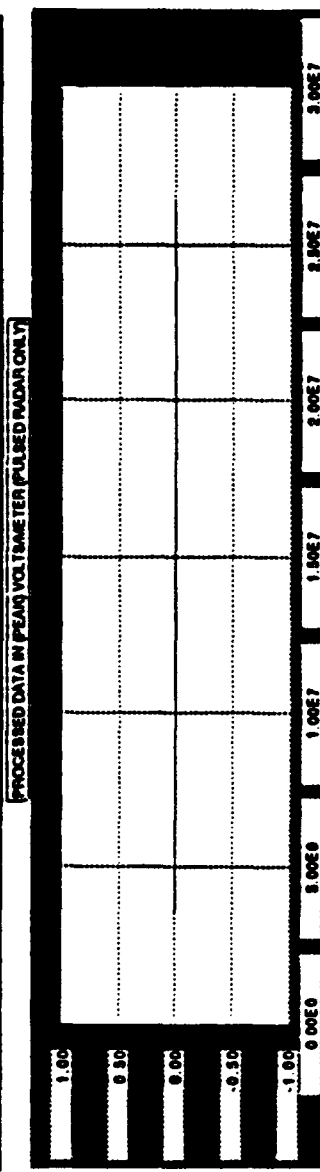
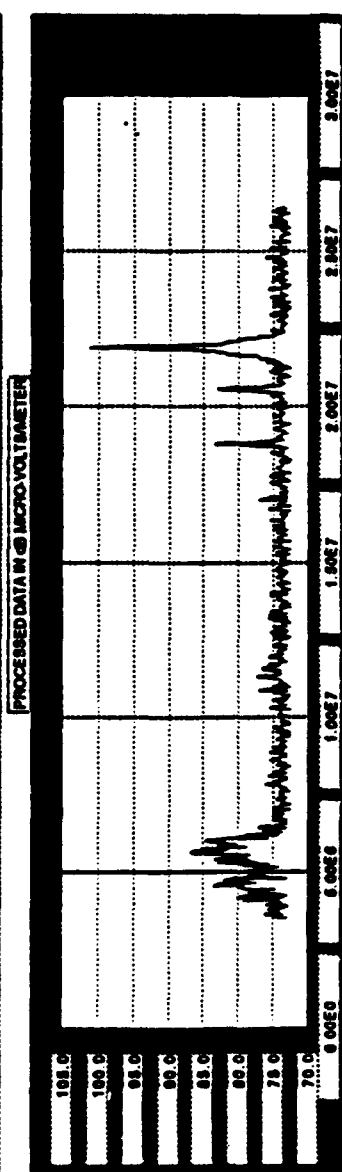
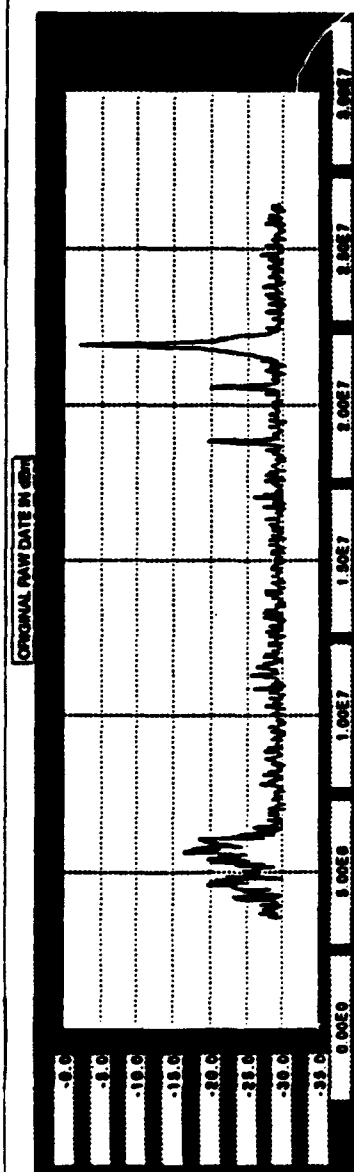
PROCESSED DATA IN PEAK VOLTMETER (PULSED RADAR ONLY)



PROCESSED DATA IN AVERAGE VOLTMETER



DUTY CYCLE: 0.5
 ANTENNA FACTOR: 1.4
 ALTITUDE: 1000
 RANGE: 10000
 DATA FILE NAME: 0000 DRIVE FLYBY DATA OTHER 1000000000000000
 ESTIMATED E-FIELD LEVEL (PEAK V/M): 0.07
 ESTIMATED E-FIELD LEVEL (AVERAGE V/M): 0.00

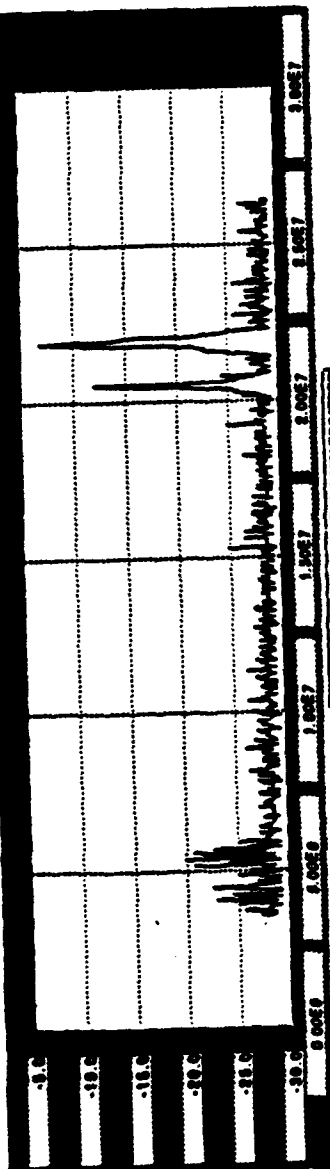


DATE	20183	ANTENNA FACTOR	1.4	ALTITUDE	1000	RADIUS	18971.33
DUTY CYCLE	50%	PACK NAME	OT-8	RANGE	15000		

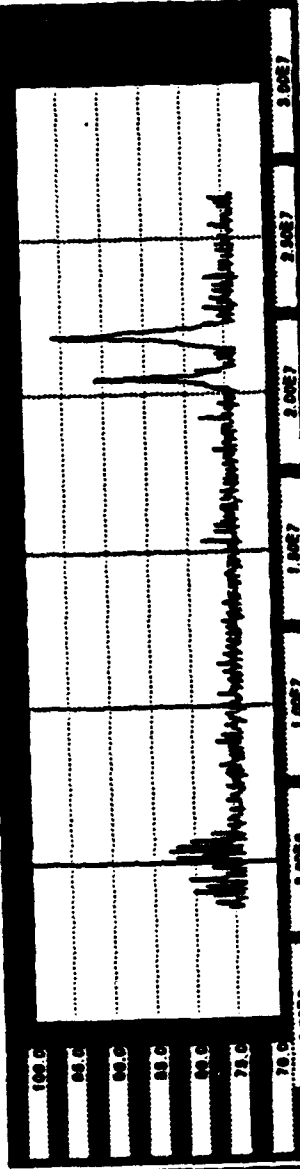
DATA FILE NAME
HAARD CURVE FL YB\DATA OT\NR13640A1000

ESTIMATED E-FIELD LEVEL (PEAK) V/M	ESTIMATED E-FIELD LEVEL (AVERAGE) V/M
0.00	0.00

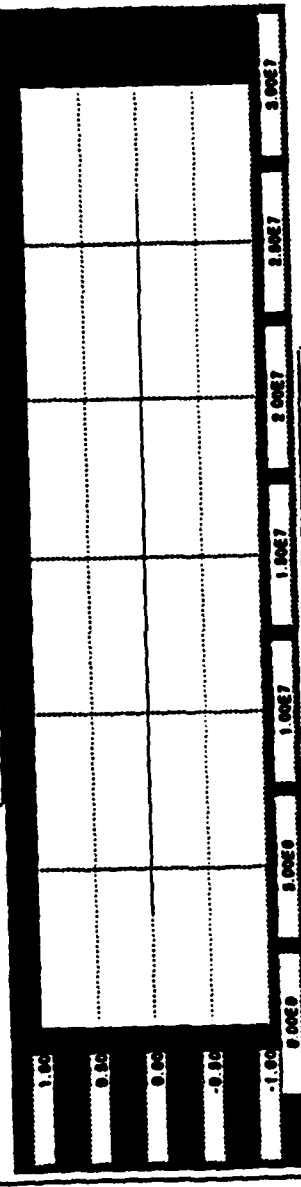
ORIGINAL RAW DATA IN GHz



PROCESSED DATA IN 48 MICRO-VOLTS/BIN



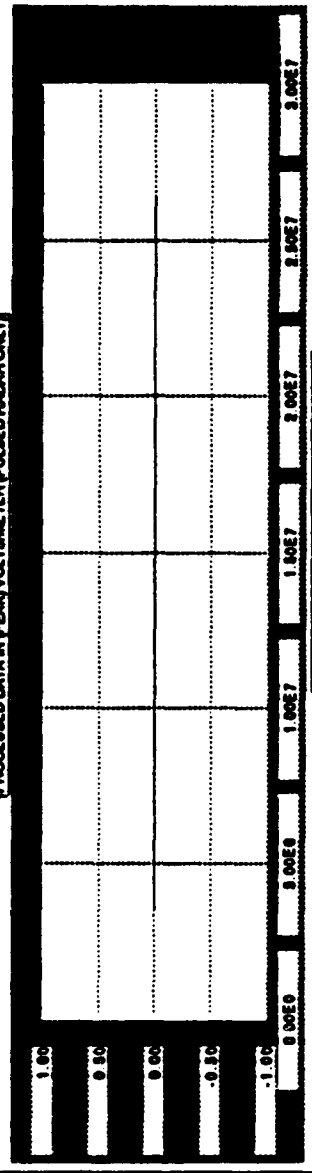
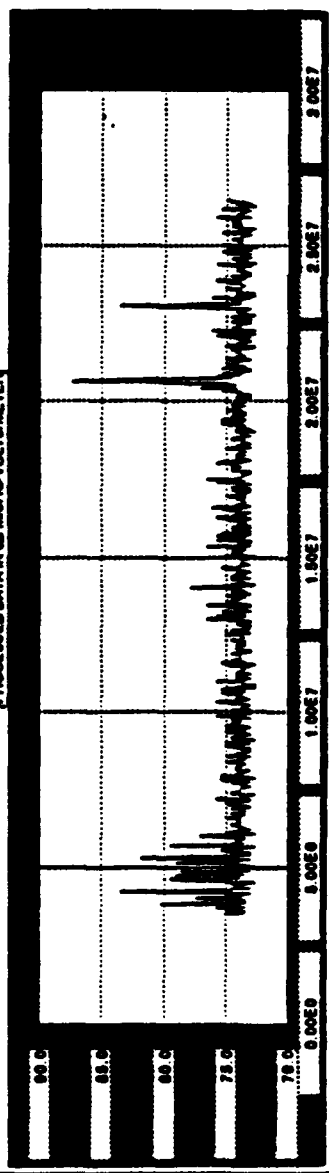
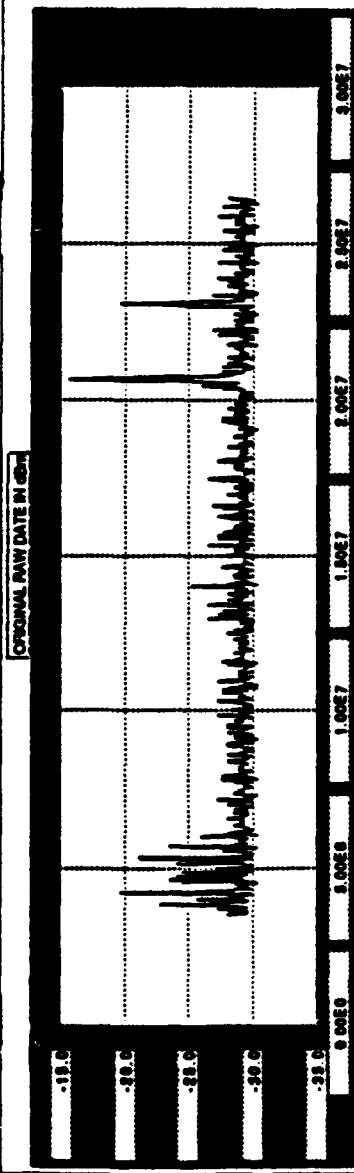
PROCESSED DATA IN PEAK VOLTS/BIN (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGED) VOLTS/BIN



DUTY CYCLE: 50%
 PAGER NAME: CPM-9
 RANGE IN: 21100
 ANTENNA FACTOR: 4
 ALTITUDE IN: 1000
 RANGE IN: 21100
 DATA FILE NAME: HUND DRIVE FL YBYDATA.DTH0021100A1000
 ESTIMATED E-FIELD LEVEL (PEAK) V/M: 0.44
 ESTIMATED E-FIELD LEVEL (AVERAGE) V/M: 0.09

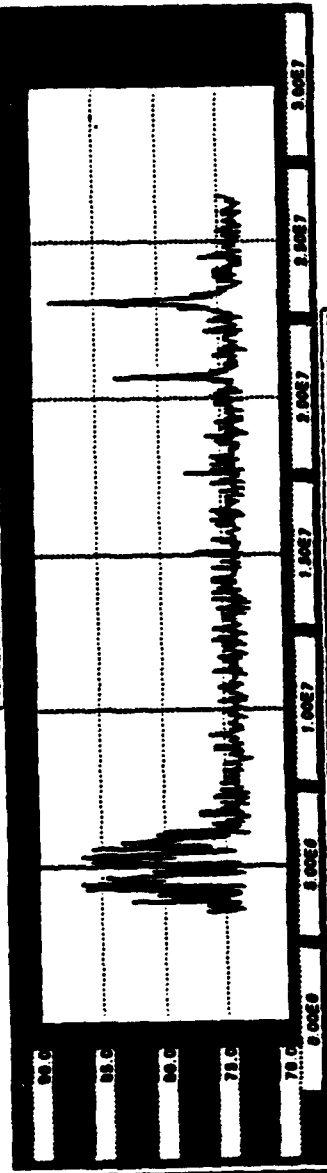


DUTY CYCLE: 50.0
 RADAR NAME: 0718
 RANGE: 21100
 ALTITUDE: 1500
 DATA FILE NAME: JUND DRIVE-FLYBYDATA 0718PRT1120A1800
 ESTIMATED E-FIELD LEVEL (PEAK) V/M: 0.44
 ESTIMATED E-FIELD LEVEL (AVERAGE) V/M: 0.09
 RADIUS: 21175.00

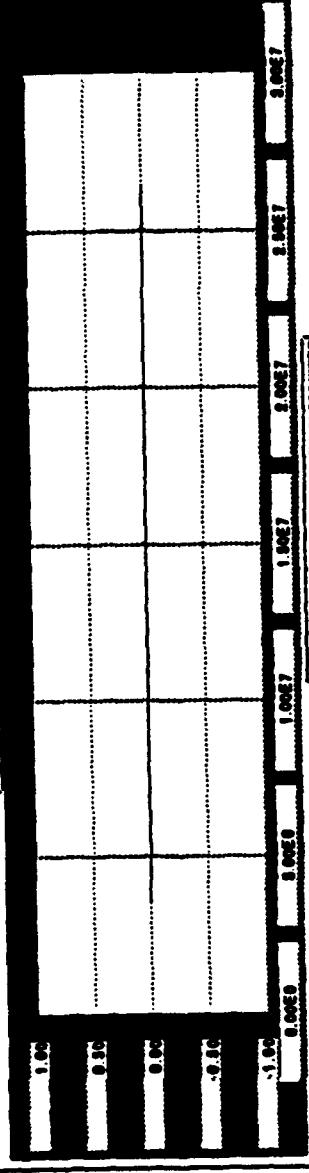
ORIGINAL RAW DATA IN GUN



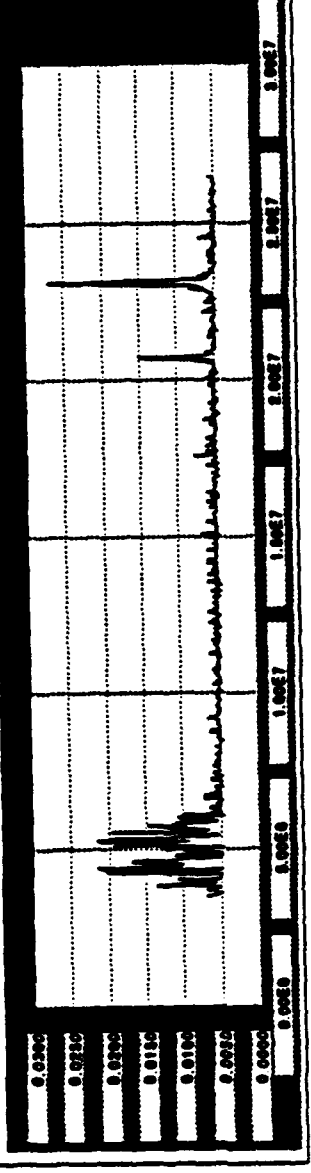
PROCESSED DATA IN MICRO-VOLTMETER



PROCESSED DATA IN PEAK VOLTMETER (PULSED RADAR ONLY)



PROCESSED DATA IN AVERAGE VOLTMETER



DATA FILE NAME
HARD DRIVE FLYBYDATA 07H0800400A1000

ESTIMATED E-FIELD LEVEL PEAK V/M
0.38

ESTIMATED E-FIELD LEVEL AVERAGE V/M
0.09

DUTY CYCLE
50

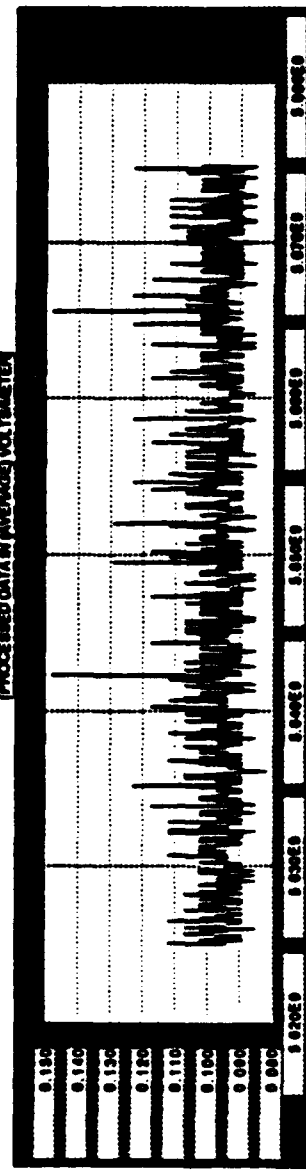
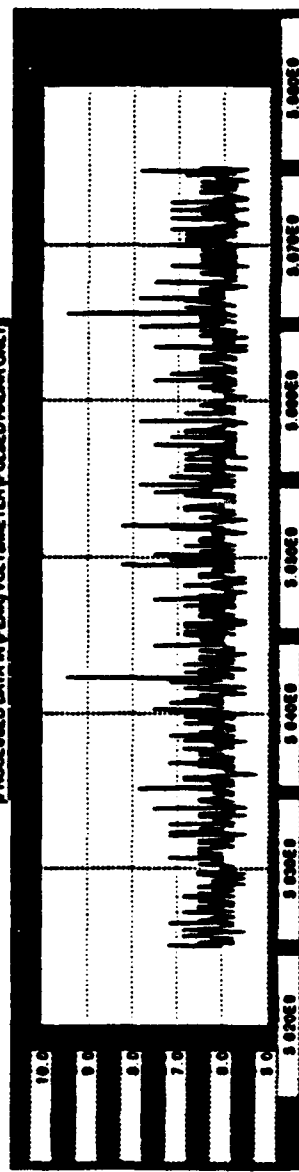
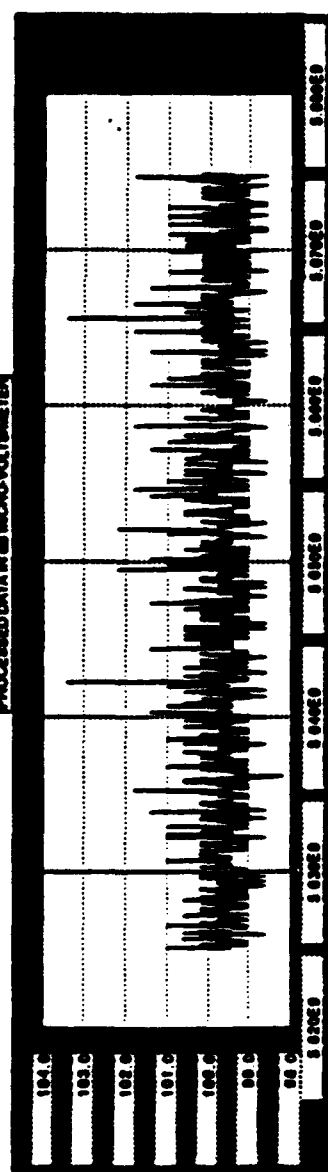
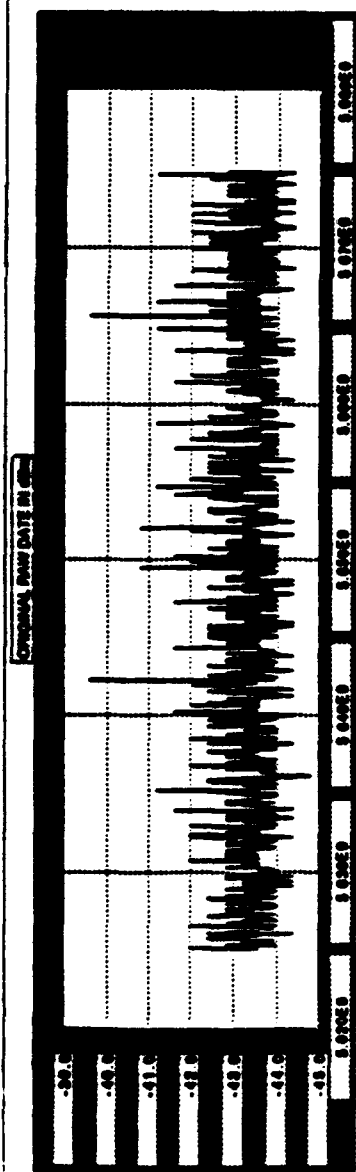
ANTENNA FACTOR (dB)
4

ALTITUDE (ft)
1000

RANGE (ft)
20400

RADIUS (ft)
20448.00

SECTION 3-3
FPS-16 DATA PLOTS



100-44-4
 DUTY CYCLE



FD-302 (Rev. 11-27-70)

ANTENNA FACTOR (dB)

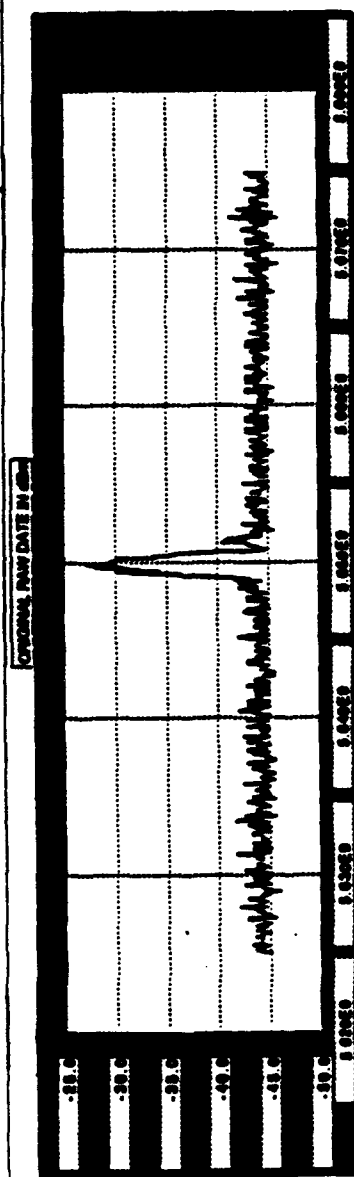
3180
PAGE 17

3207.48

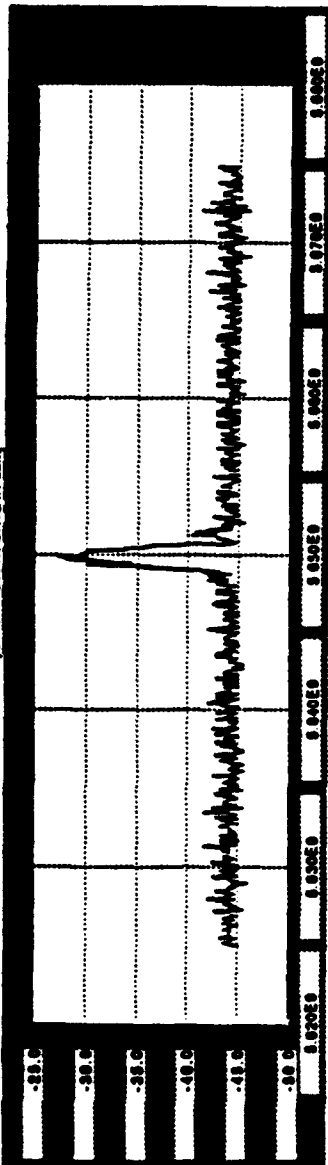
DATA FILE NAME	BOARD DRIVE FLY
DATA FILE NAME	BOARD DRIVE FLY

ESTIMATED 2-FIELD LEVEL PEAK VARIATION

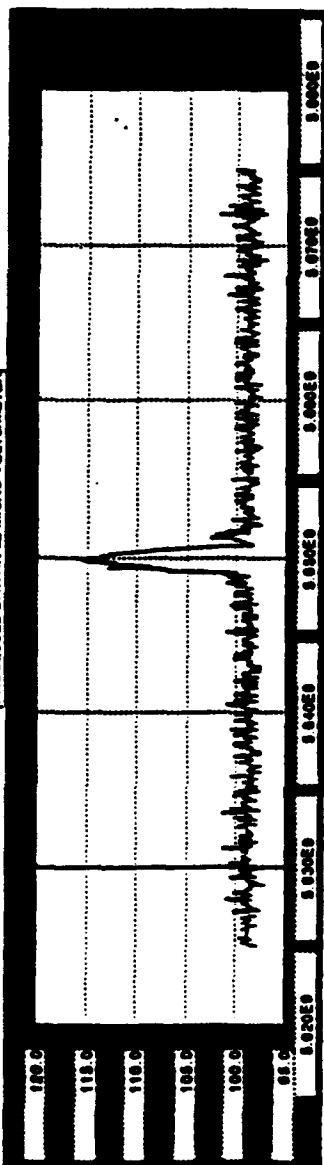
ESTIMATED FIELD LEVEL AVERAGE VAS 23.00



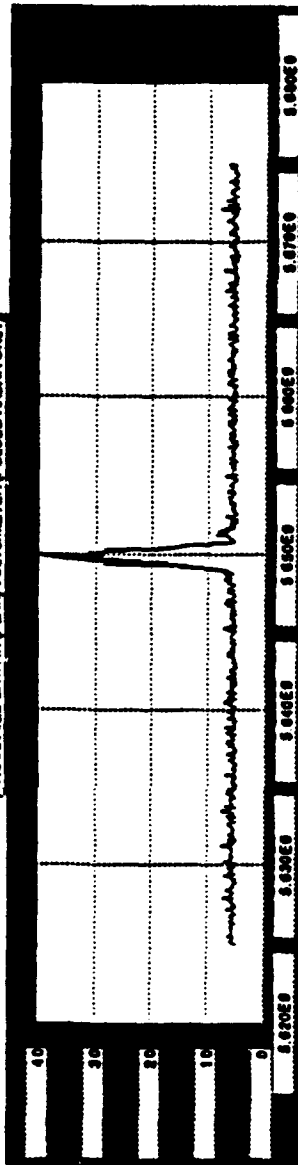
ORIGINAL RAW DATA IN GHz



PROCESSED DATA IN GHz MICROVOLT/METER



PROCESSED DATA IN PEAK VOLT/METER (PULSED RADAR ONLY)



PROCESSED DATA IN AVERAGE VOLT/METER



DUTY CYCLE

50.00

ANTENNA FACTOR (dB)

5.0

RADAR NAME

77910

ALTITUDE (ft)

1200

RANGE (ft)

1200

RANGE (m)

1097.4

DATA FILE NAME

HARD DRIVE A:\VTDATA\77910R000001.DAT

ESTIMATED E-FIELD LEVEL (PEAK) V/M

008.00

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M

11.00

DATA FILE NAME

HARD DRIVE A:\VTDATA\77910R000001.DAT

ESTIMATED E-FIELD LEVEL (PEAK) V/M

008.00

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M

11.00

DATA FILE NAME

HARD DRIVE A:\VTDATA\77910R000001.DAT

ESTIMATED E-FIELD LEVEL (PEAK) V/M

008.00

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M

11.00

DATA FILE NAME

HARD DRIVE A:\VTDATA\77910R000001.DAT

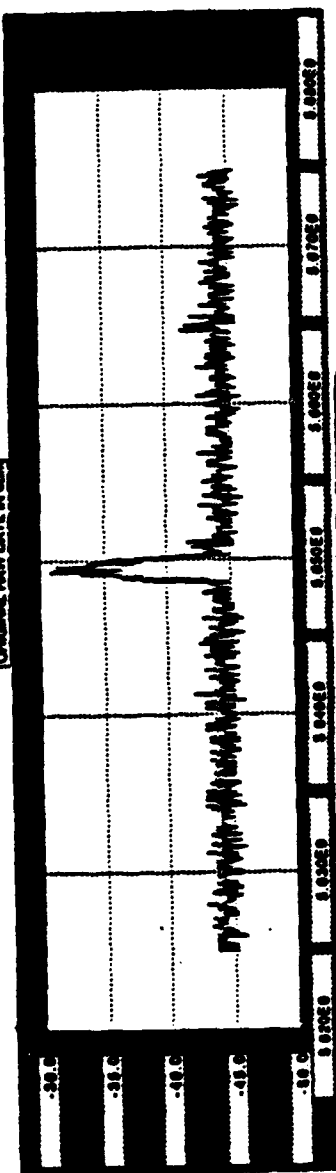
ESTIMATED E-FIELD LEVEL (PEAK) V/M

008.00

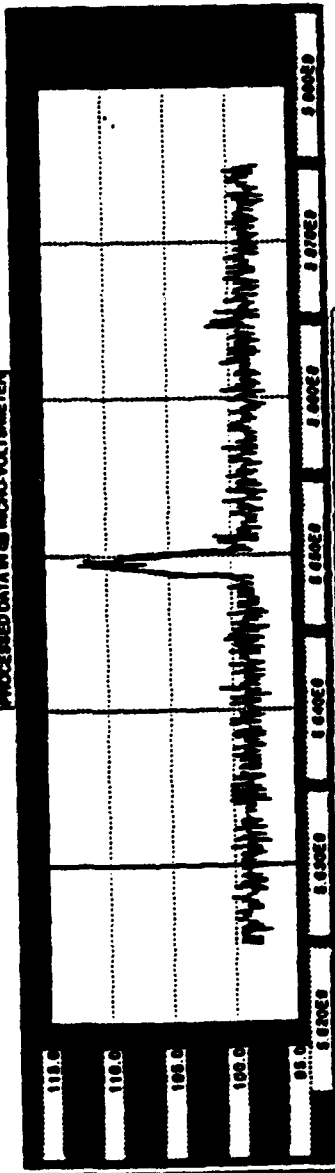
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M

11.00

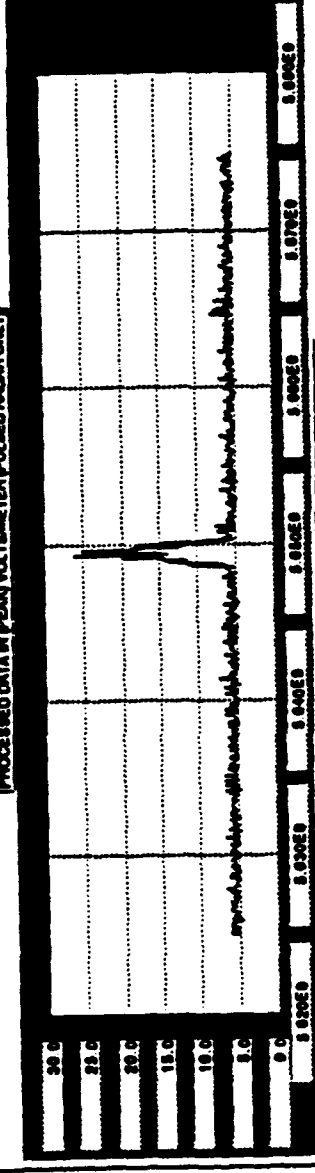
ORIGINAL RAW DATA IN GUN



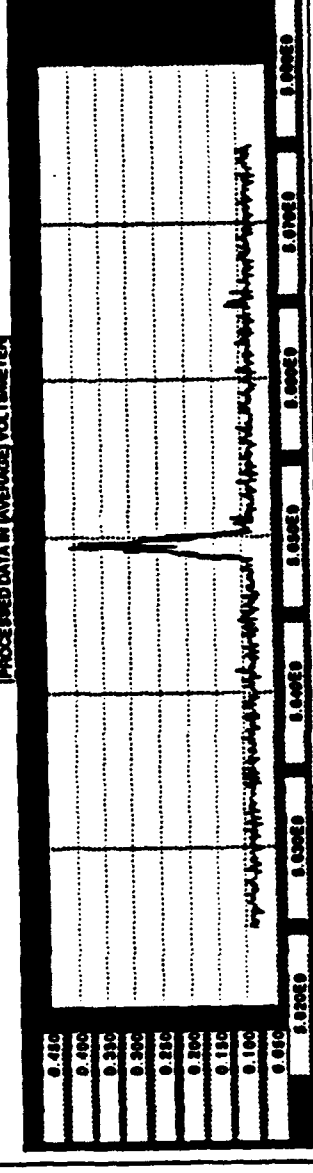
PROCESSED DATA IN MICRO-VOLTMETER



PROCESSED DATA IN PEAK VOLTMETER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLTMETER



DUTY CYCLE
50.00-4

PADAR NAME
PP910

RANGE IN
0000

ANTENNA FACTOR IN
30

ALTITUDE IN
1200

RADIUS IN
0700.40

DATA FILE NAME

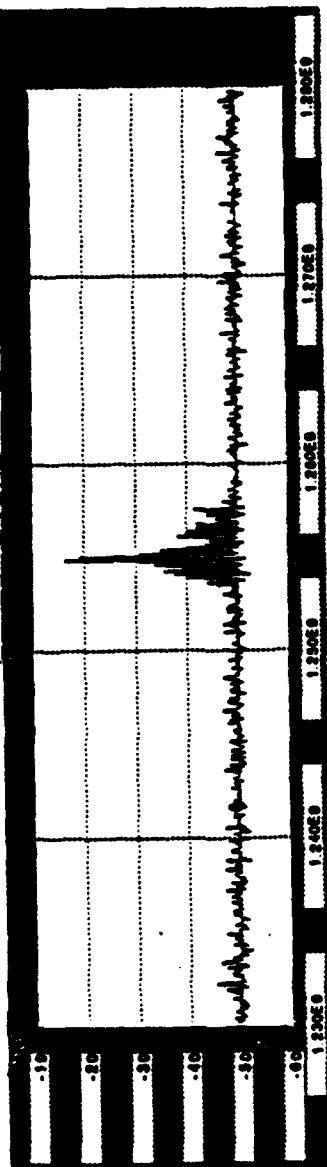
WIND DRIVE FLYBYDATA PP910RADAR041290

ESTIMATED E-FIELD LEVEL (PEAK) V/M
437.50

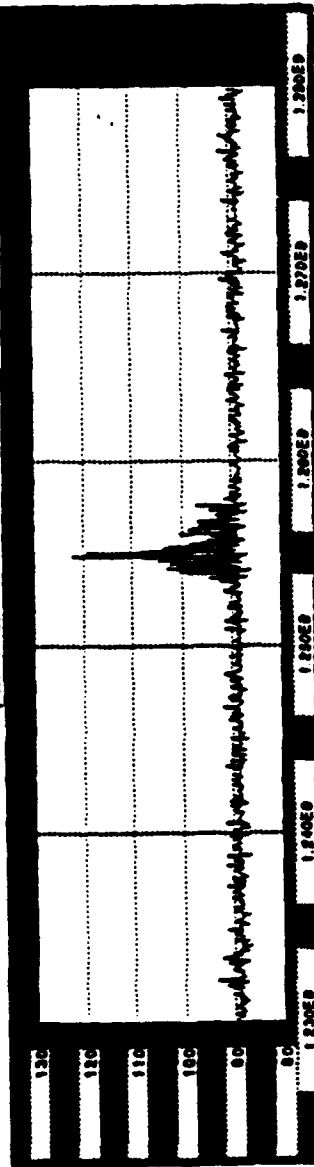
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M
11.50

SECTION 3-4
FPS-65 DATA PLOTS

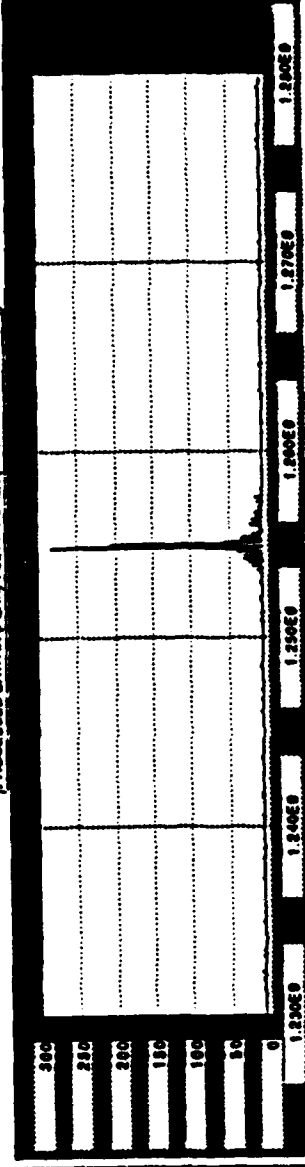
ORIGINAL RAW DATA IN GHz



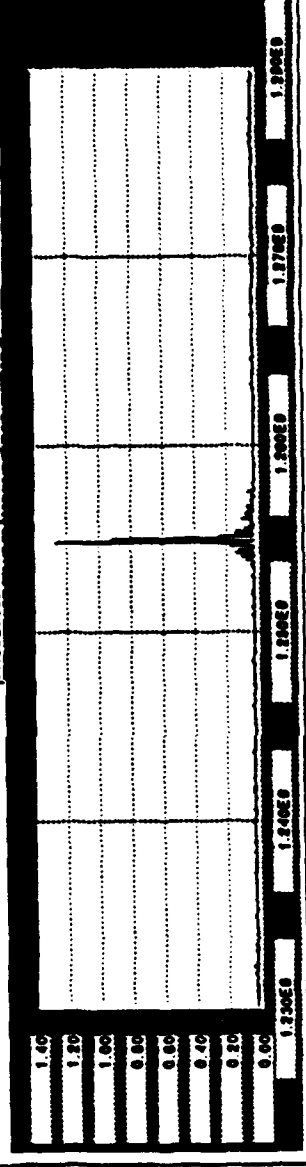
PROCESSED DATA IN GHz MICRO-VOLTMETER



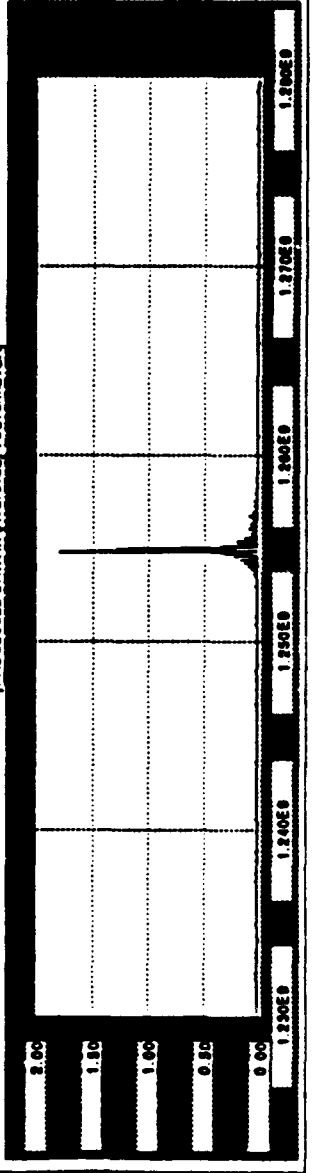
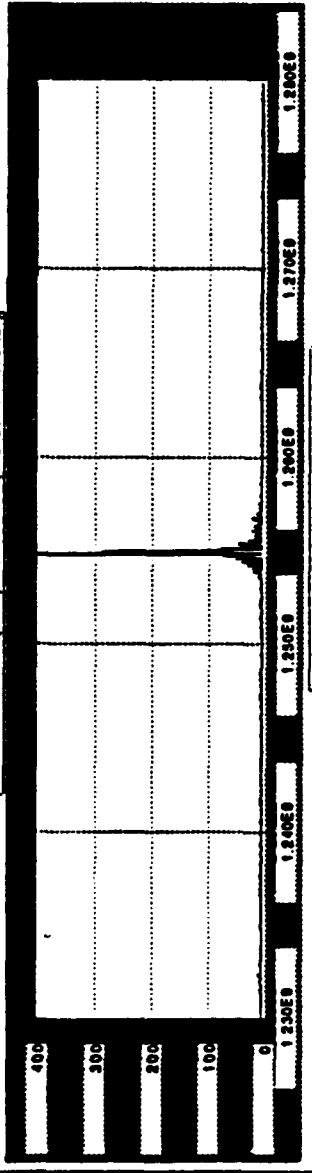
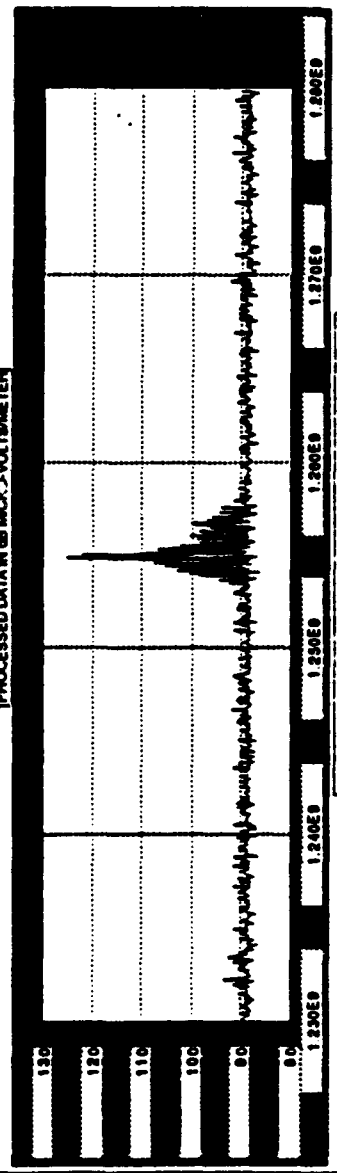
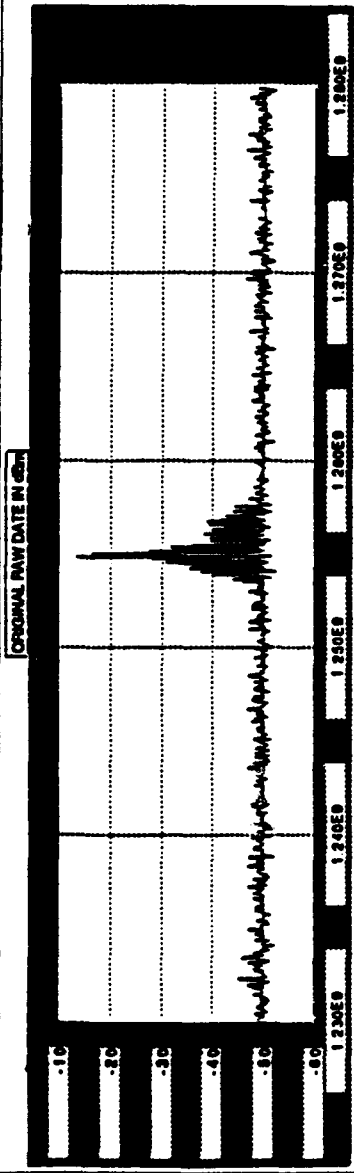
PROCESSED DATA IN PEAK VOLTMETER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLTMETER



DUTY CYCLE	0.250	ANTENNA FACTOR (dB)	31.5	RANGE (m)	1800	ALTITUDE (m)	15019.85
DATA NAME	77900	DATA FILE NAME	HARD DRIVE FLYBY DATA 77900R15040A1500				
ESTIMATED E-FIELD LEVEL (PEAK) V/M	0.33	ESTIMATED E-FIELD LEVEL (AVERAGE) V/M	4.35				



DUTY CYCLE: 0.250

ANTENNA FACTOR: 31.8

RANGE (ft): 10800

ALTITUDE (ft): 1800

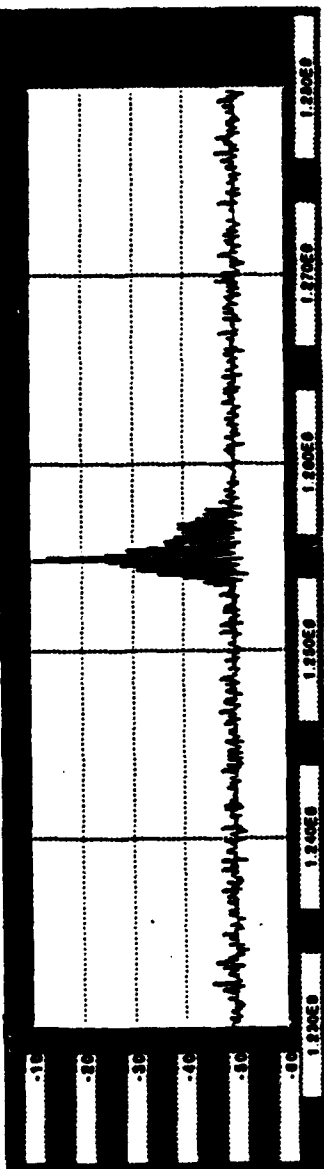
RADIUS (ft): 10000.00

DATA FILE NAME: HARD DRIVE FLYBYDATA FP06SR10600A1800

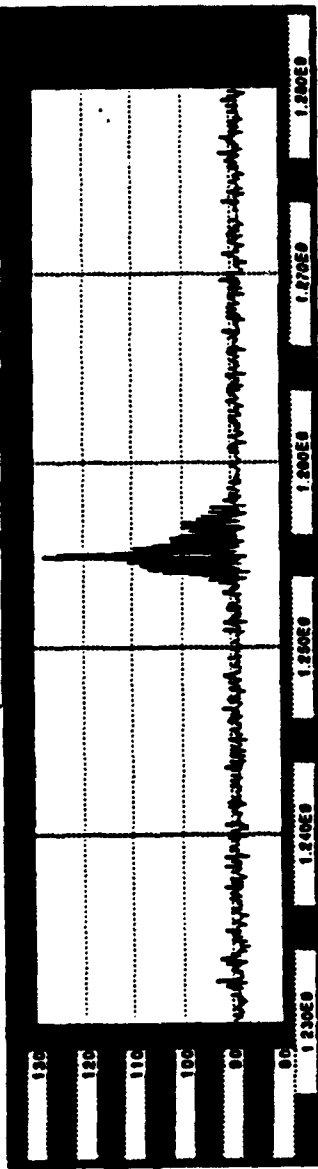
ESTIMATED E-FIELD LEVEL (PEAK VAL): 137.73

ESTIMATED E-FIELD LEVEL (AVERAGE VAL): 5.49

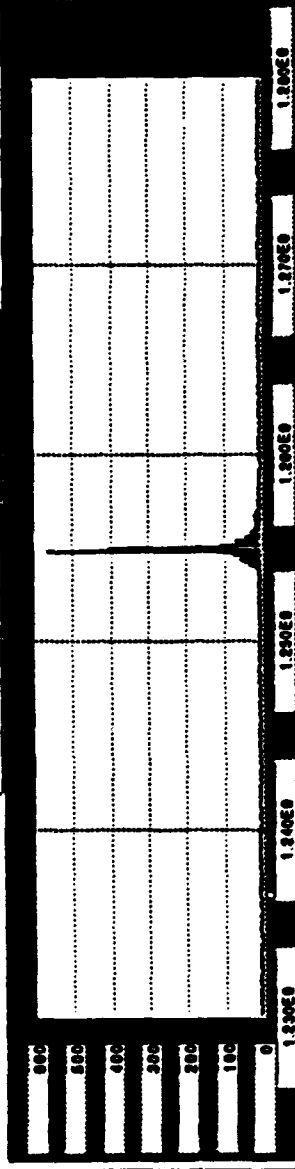
ORIGINAL RAW DATA IN dBm



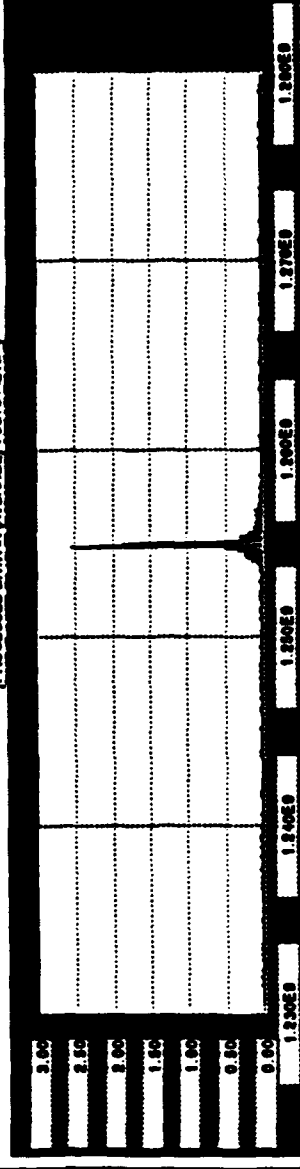
PROCESSED DATA IN dB MICRO-VOLTMETER



PROCESSED DATA IN PEAK VOLTMETER PULSED RADAR ONLY



PROCESSED DATA IN (AVERAGE) VOLTMETER



DUTY CYCLE 50.000
PULSE WIDTH 1.000
PULSE RATE 1.000
ANTENNA FACTOR (dB) 31.9
ALTITUDE (ft) 1000
RADIUS (ft) 1000.00

DATA FILE NAME

HARD DRIVE FLYBYDATA FP 865R120041800

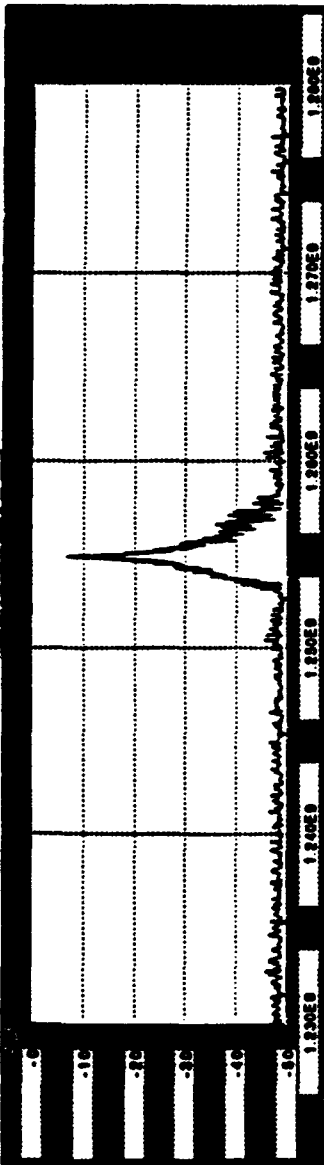
ESTIMATED E-FIELD LEVEL (PEAK) V/M

207.83

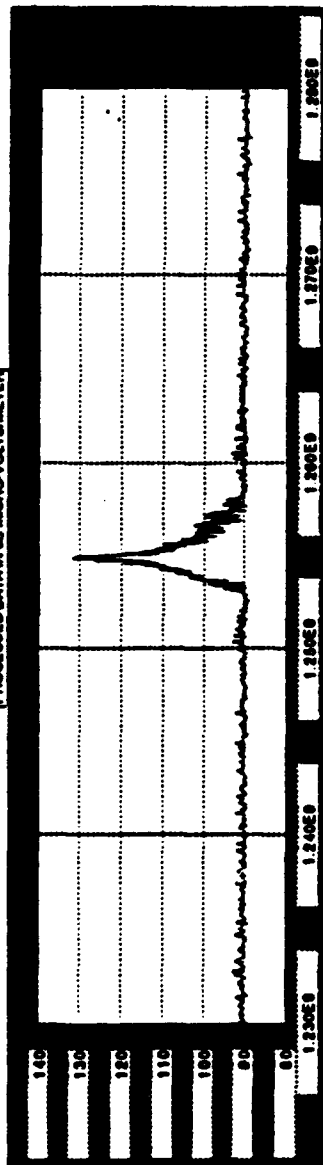
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M

132.81

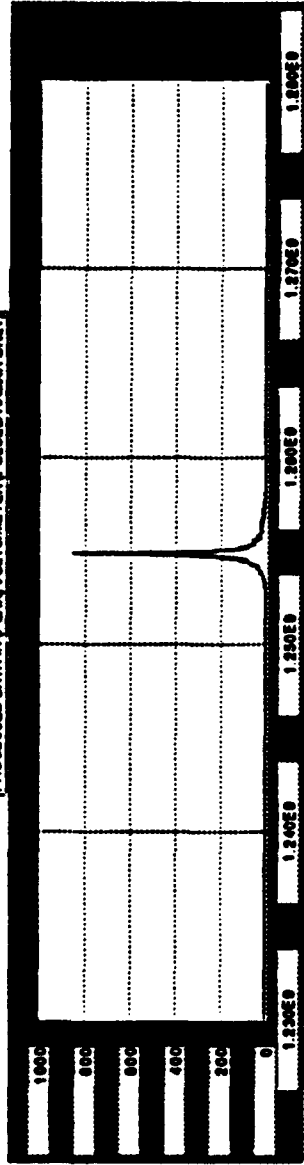
CORRELATION DATA IN GHz



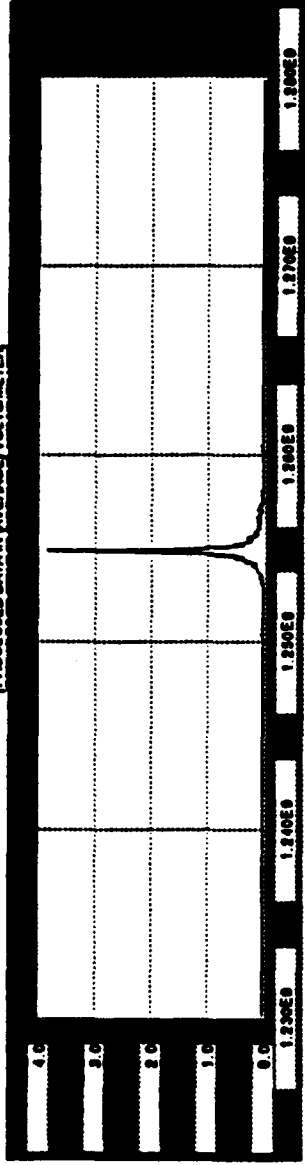
PROCESSED DATA IN dB MICRO VOLTMETER



PROCESSED DATA IN PEAR VOLTMETER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLTMETER



DUTY CYCLE
50.00E-3

SW
15.0.000

RADAR NAME
P7000

ANTENNA FACTOR
11.1

RANGE
5200

ALTITUDE
1200

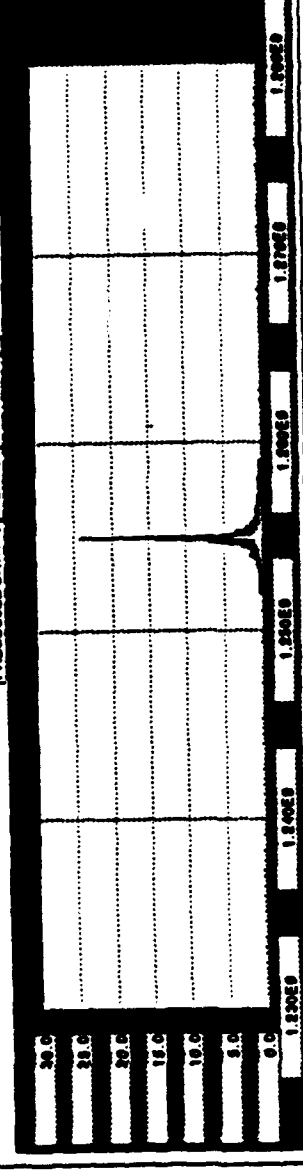
RADIUS
6400.00

DATA FILE NAME

RAVIO DRIVE FLV9VQDATA P7000R0000A1200

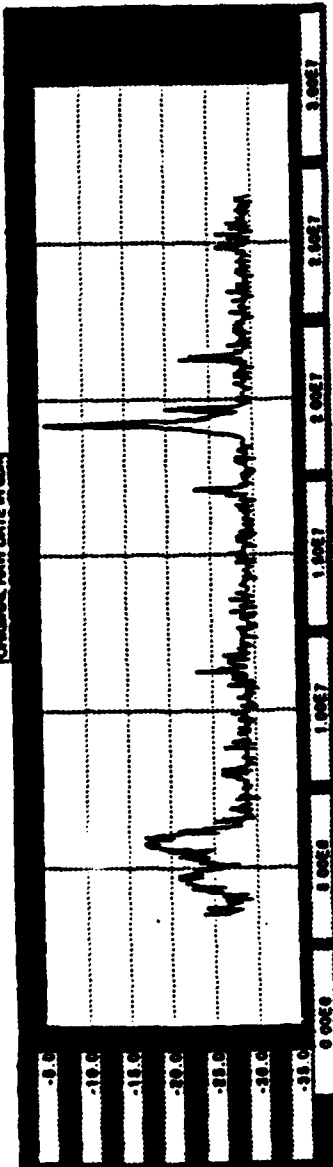
ESTIMATED E-FIELD LEVEL (PEAK) V/M
373.74

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M
12.70

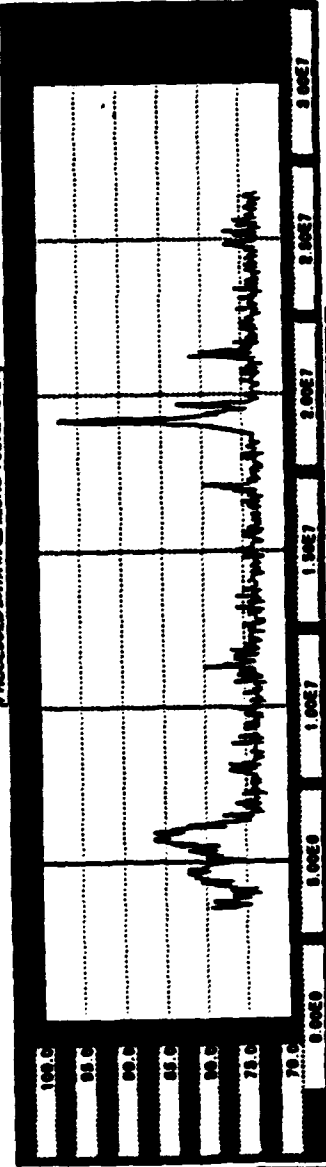


SECTION 3-5
OTHB PHASE II DATA PLOTS

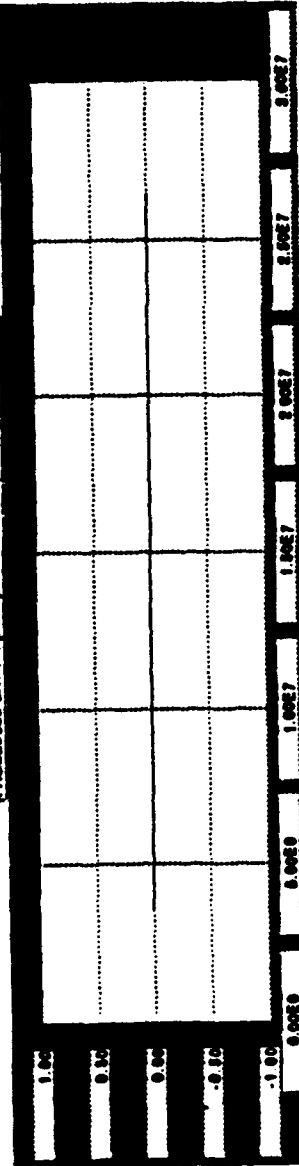
ORIGINAL RAW DATA IN



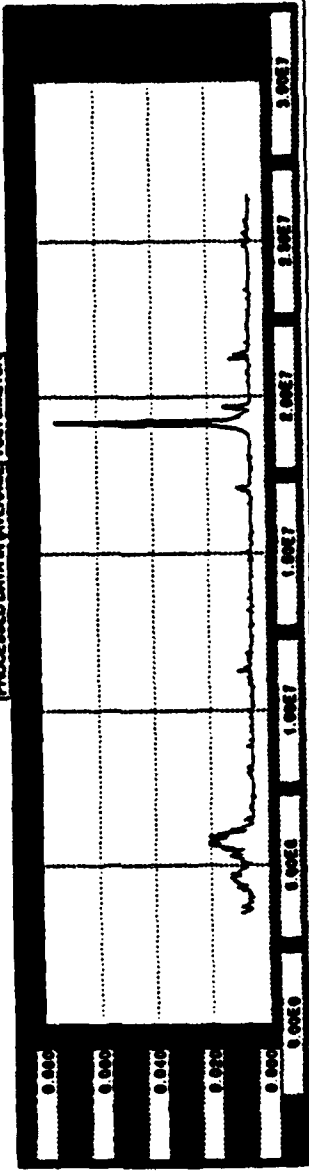
PROCESSED DATA IN MICROVOLT METER



PROCESSED DATA IN PEAK VOLT METER (PULSED RADAR ONLY)



PROCESSED DATA IN AVERAGE VOLT METER



DUTY CYCLE
0.00

RADAR NAME
C78

RANGE IN
0

CTF
00183

ANTENNA FACTOR IN
4

ALTITUDE IN
TOP-1

RADIUS IN
0.00

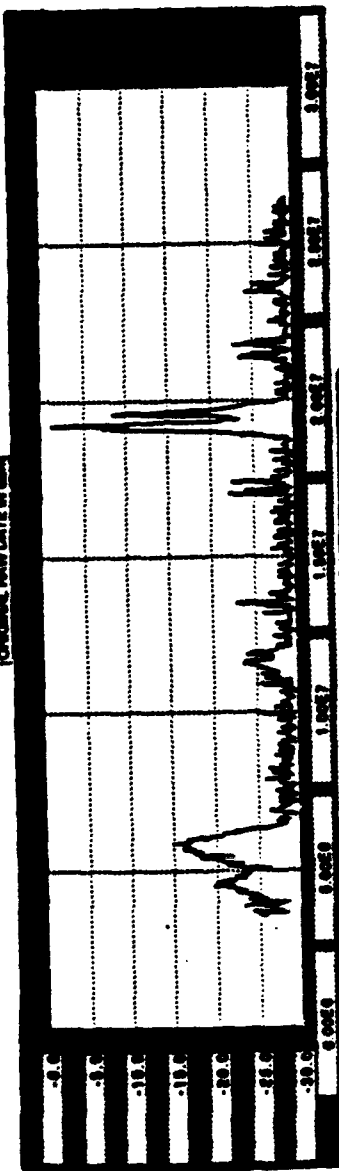
DATA FILE NAME

HAND DRIVE / LVST DATA OTHER / TOP-1

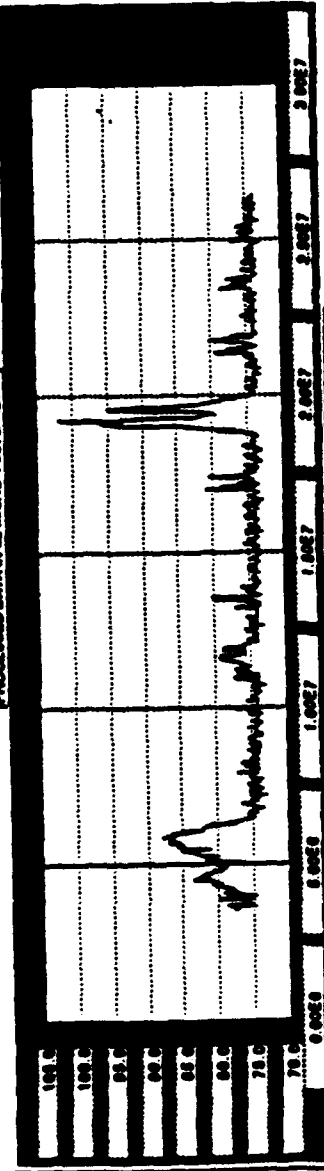
ESTIMATED E-FIELD LEVEL (PEAK) V/M
10

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M
100

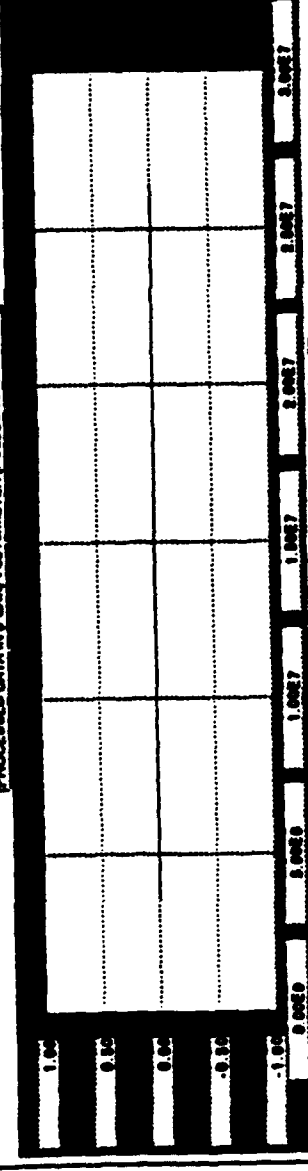
ORIGINAL RAW DATA IN (mV)



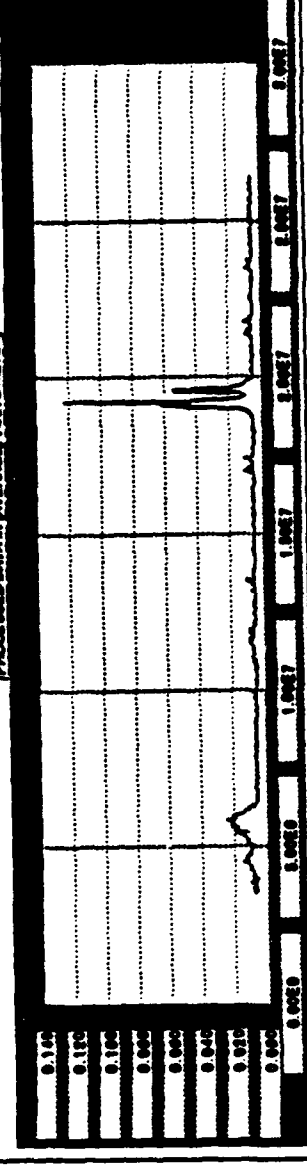
PROCESSED DATA IN (mV) MICRO-VOLTMETER



PROCESSED DATA IN PEAK VOLTMETER PULSED IN (mV)



PROCESSED DATA IN AVERAGE VOLTMETER



CURT CYCLE
100

PAUSE TIME
0.00

RANGE IN
100

ANTENNA FACTOR (dB)
20.0

ANTENNA FACTOR (dB)
20.0

ALTITUDE IN
1000

RANGE IN
1000

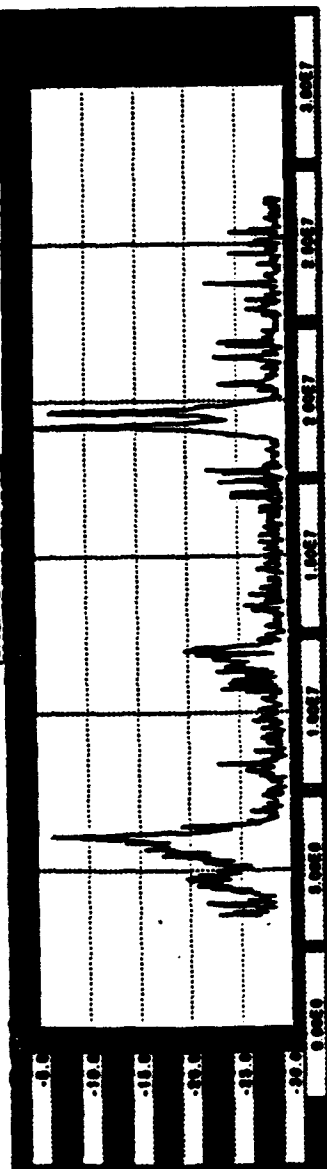
DATA FILE NAME

HARD DRIVE PL VTDATA OTHERSUSCNC

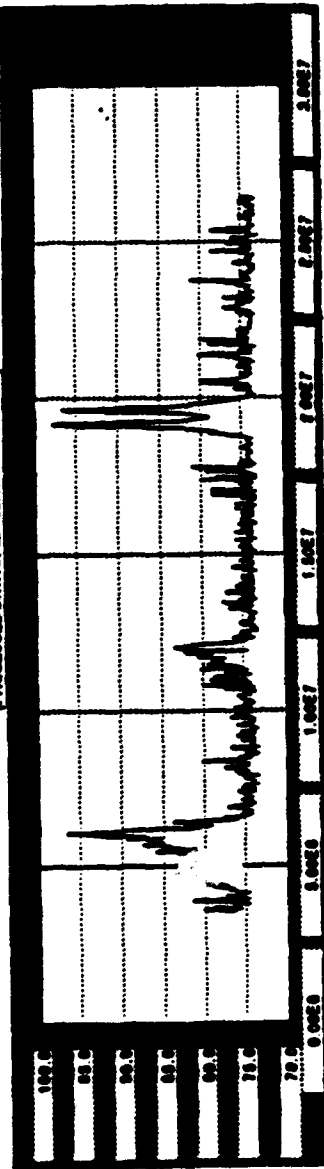
ESTIMATED E-FIELD LEVEL PEAK V/A
10.11

ESTIMATED E-FIELD LEVEL AVERAGE V/A
2.00

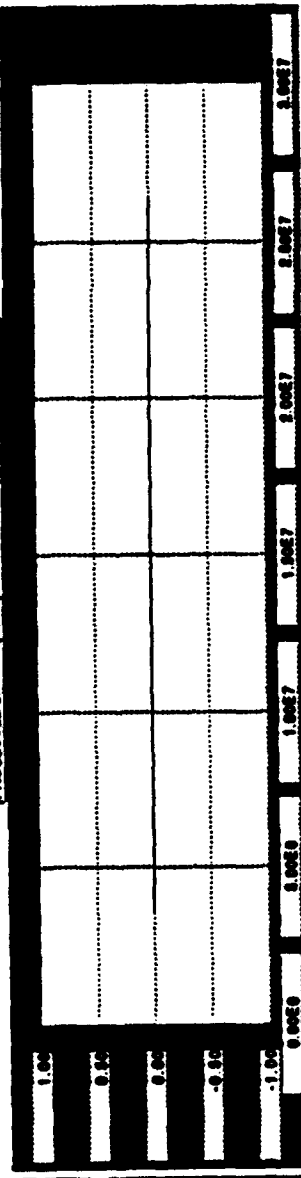
ORIGINAL RAW DATA IN GHz



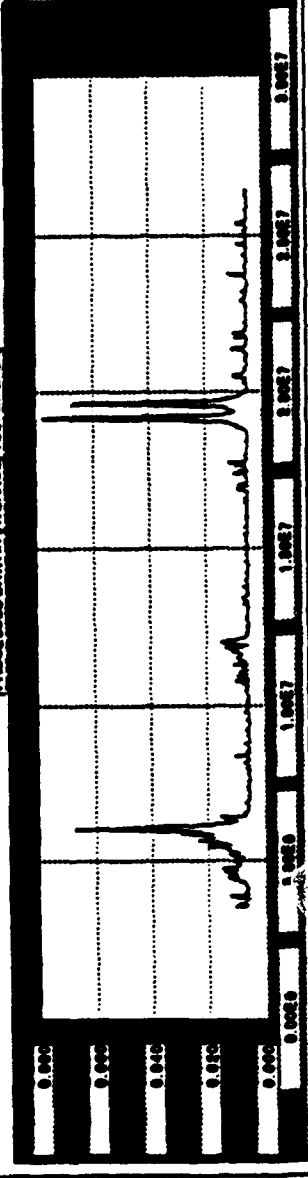
PROCESSED DATA IN GHz MICRO-VOLTMETER



PROCESSED DATA IN PEAK VOLT-METER (PULSED RADAR ONLY)

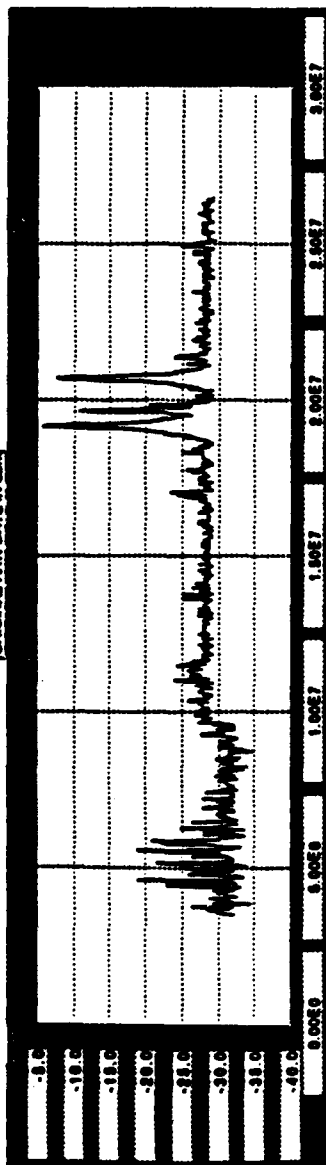


PROCESSED DATA IN (AVERAGE) VOLTMETER

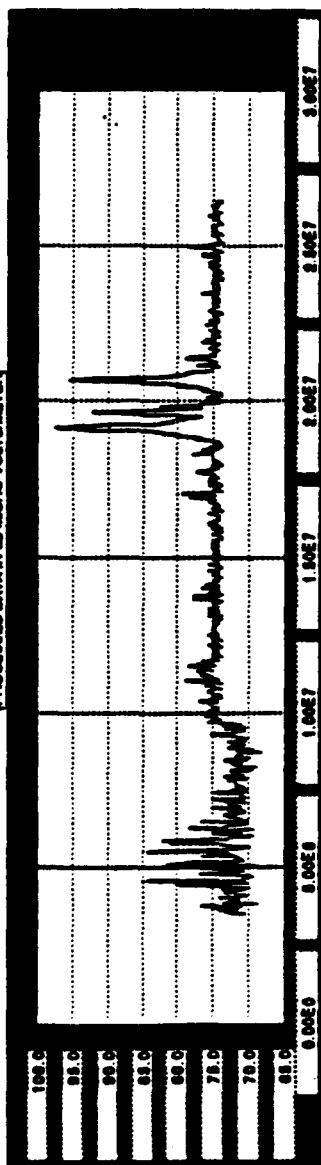


DATA CYCLE	10183
RADAR NAME	CH-4
ANTENNA FACTOR (dB)	-4
RANGE (ft)	1000
ALTITUDE (ft)	10000
DATA FILE NAME	NOOD DRIVE PL 1810 DATA 07-18-68-041300
ESTIMATED E-FIELD LEVEL (PEAK) V/M	0.40
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M	0.40

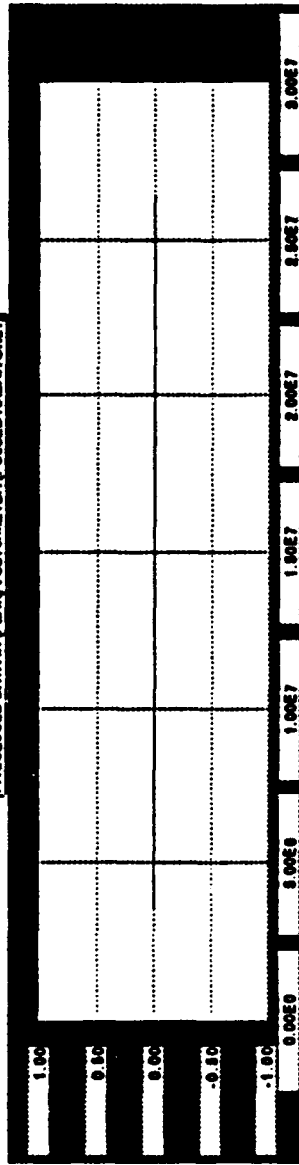
ORIGINAL RAW DATA IN GHz



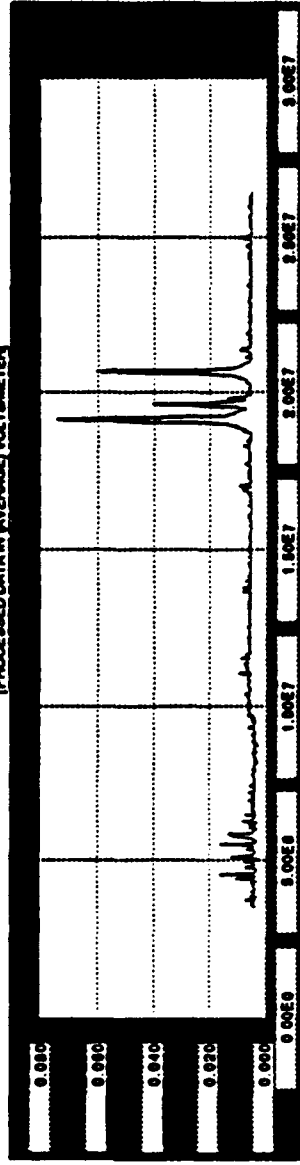
PROCESSED DATA IN GHz MICRO-VOLTMETER



PROCESSED DATA IN PEAK VOLT METER (PULSED RADAR ONLY)



PROCESSED DATA IN AVERAGE VOLTMETER



DUTY CYCLE

50.0

GPS

20180

RADAR NAME

QTH

ANTENNA FACTOR

4

RANGE

5000

ALTITUDE

700.1

RADIUS

5333.00

DATA FILE NAME

HAND DRIVE FLV DATA OF HBR000A170-1

ESTIMATED E-FIELD LEVEL PEAK V/M

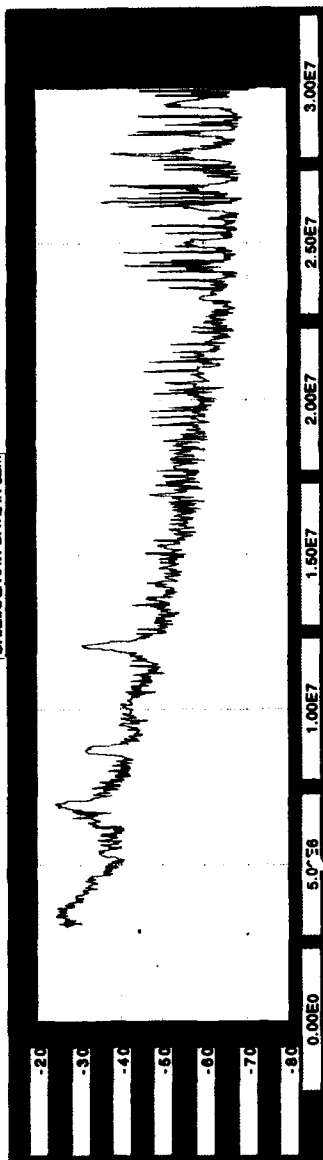
1.74

ESTIMATED E-FIELD LEVEL AVERAGE V/M

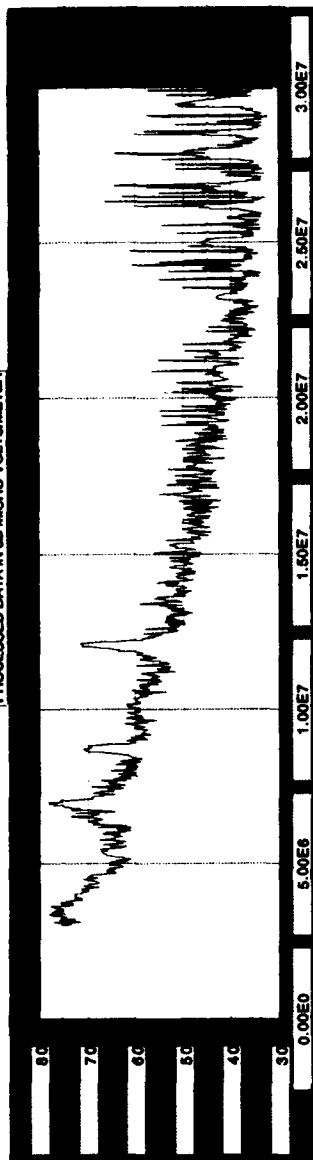
0.90

SECTION 3-6
HHC DATA PLOTS

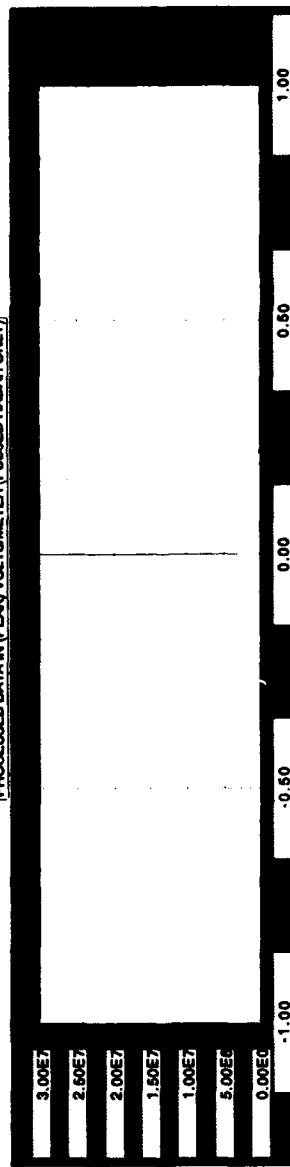
ORIGINAL RAW DATA IN dBm



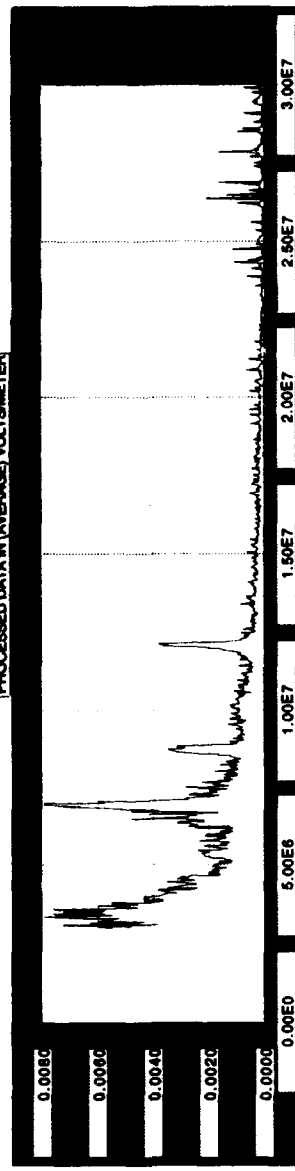
PROCESSED DATA IN dB MICRO-VOLTS/METER



PROCESSED DATA IN (PEAK) VOLTS/METER (PULSED RADAR ONLY)

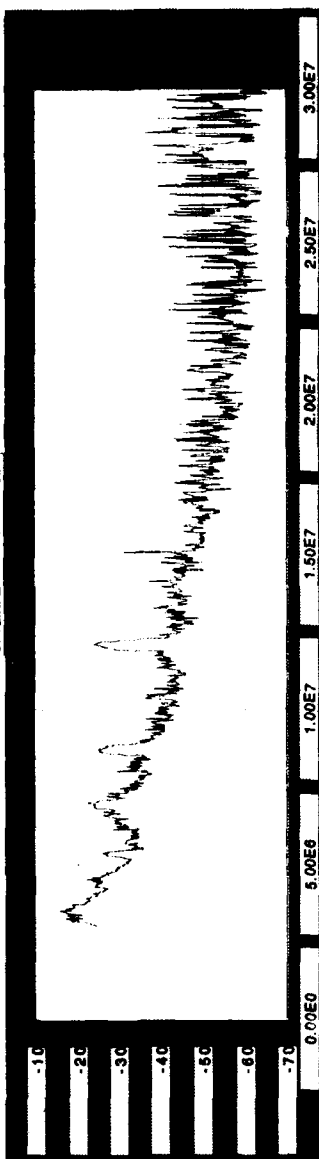


PROCESSED DATA IN (AVERAGE) VOLTS/METER

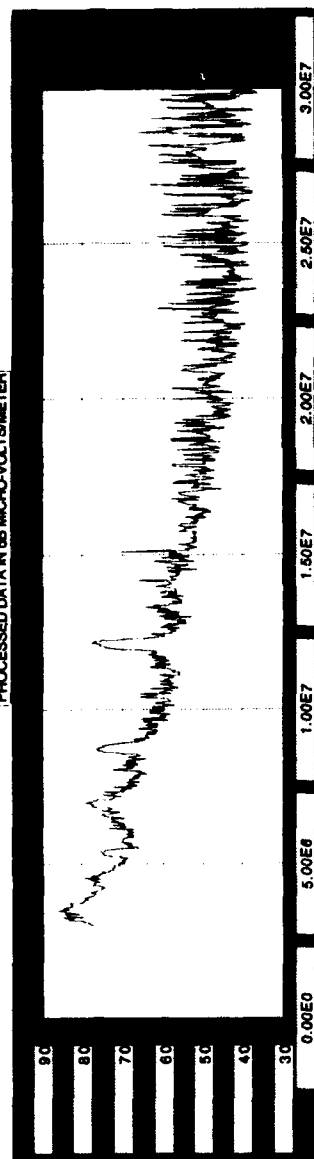


DUTY CYCLE	0.00	DISK ERROR	0.00
RADAR NAME	HC	ANTENNA FACTOR (dB)	5
RANGE (M)	116	ALTITUDE (M)	1184FSIDE
		RADIUS (M)	192.63
DATA FILE NAME			
MONTANA:FLYBYDATA:HCOR116A1184FSIDE			
ESTIMATED E-FIELD LEVEL (PEAK) (V/M)			
0.00			
ESTIMATED E-FIELD LEVEL (AVERAGE) (V/M)			
0.00			

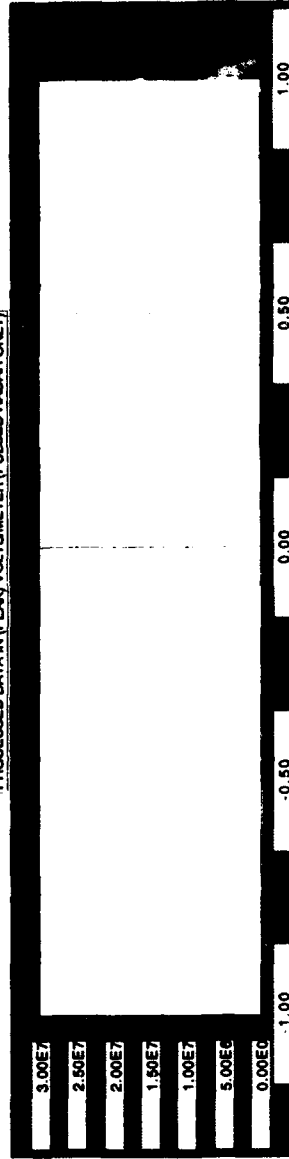
ORIGINAL RAW DATE IN dBm



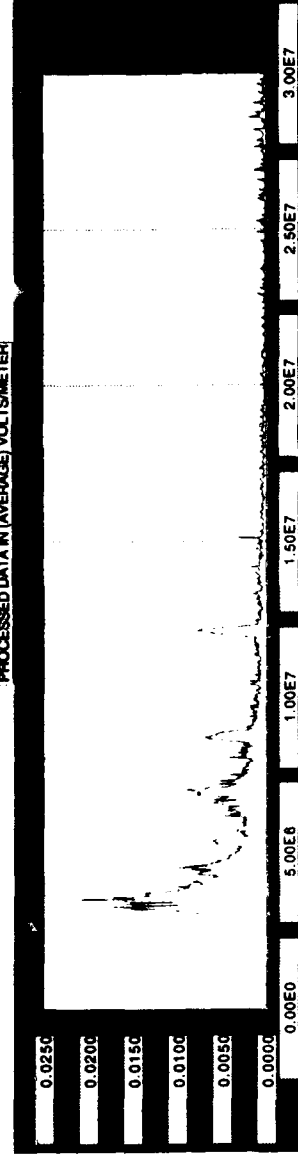
PROCESSED DATA IN dB MICRO-VOLTS/METER



PROCESSED DATA IN (PEAK) VOLTS/METER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLTS/METER



DISK ERROR
10.00

BPP
10

DUTY CYCLE
10

ANTENNA FACTOR (dB)
5

RADAR NAME
HHC

RADIUS (ft)
182.83

ALTITUDE (ft)
115HFFRONT

RANGE (ft)
115

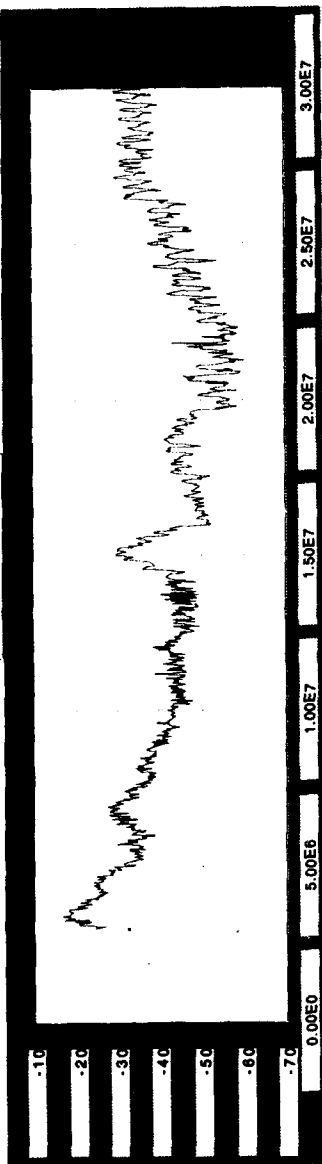
DATA FILE NAME

MONTANA:FLYBYDATA\HHC115A115HFFRONT

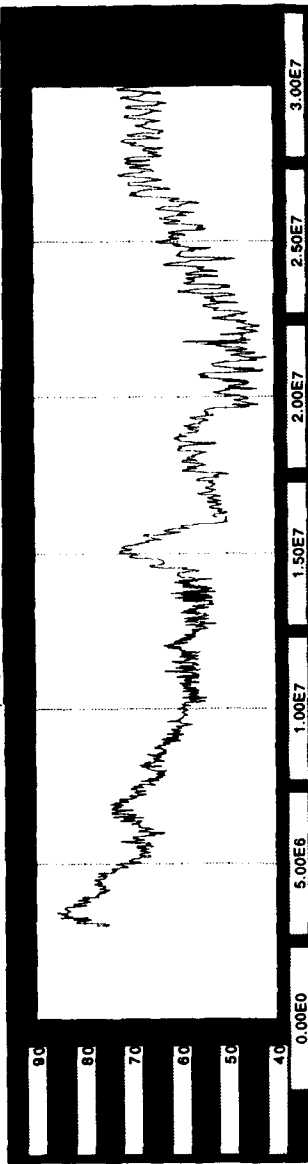
ESTIMATED E-FIELD LEVEL (PEAK) V/M
0.00

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M
0.00

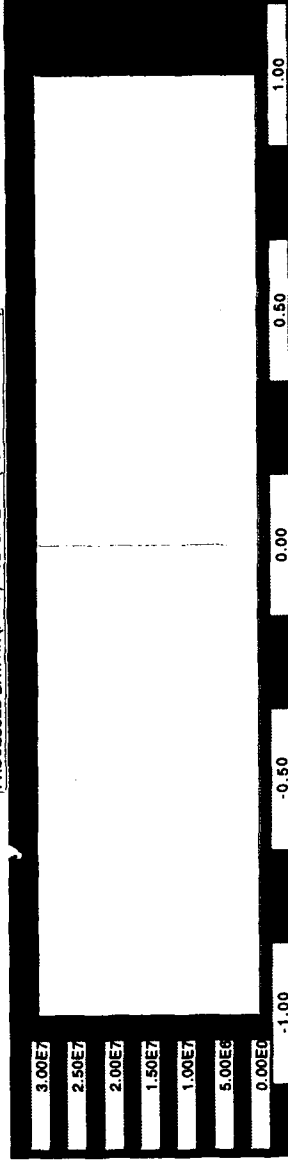
ORIGINAL RAW DATA IN dBm



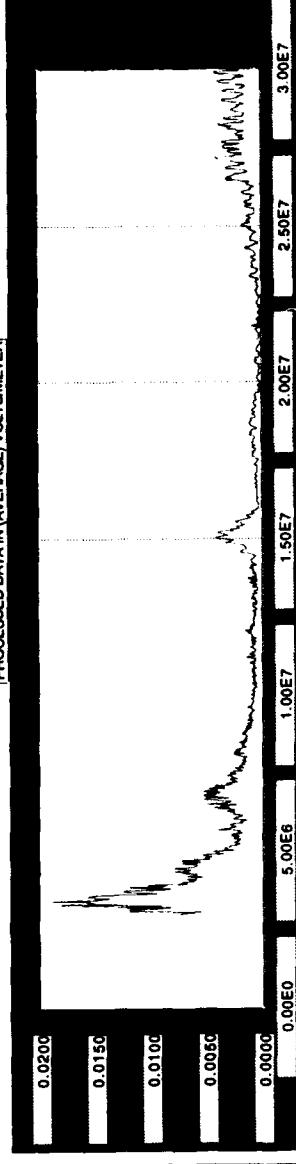
PROCESSED DATA IN dB MICRO-VOLTMETER



PROCESSED DATA IN (PEAK) VOLTMETER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLTMETER



DUTY CYCLE
0.00

ERR
0.00

DISK ERROR
0.00

ANTENNA FACTOR (dB)
1.5

RADAR NAME
HHC

RADIUS (ft)
343.65

ALTITUDE (ft)
243HFSIDE

RANGE (ft)
243

DATA FILE NAME

MONTANA:FLYBYDATA:HHCR243A243HFSIDE

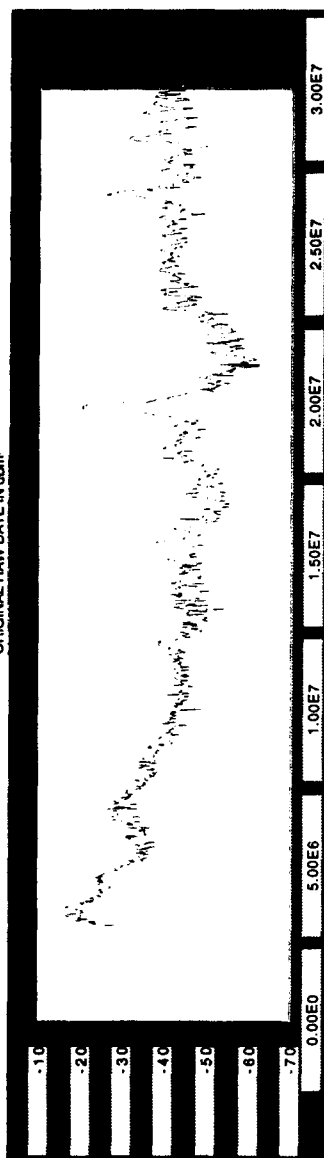
ESTIMATED E-FIELD LEVEL (PEAK) V/M

0.00

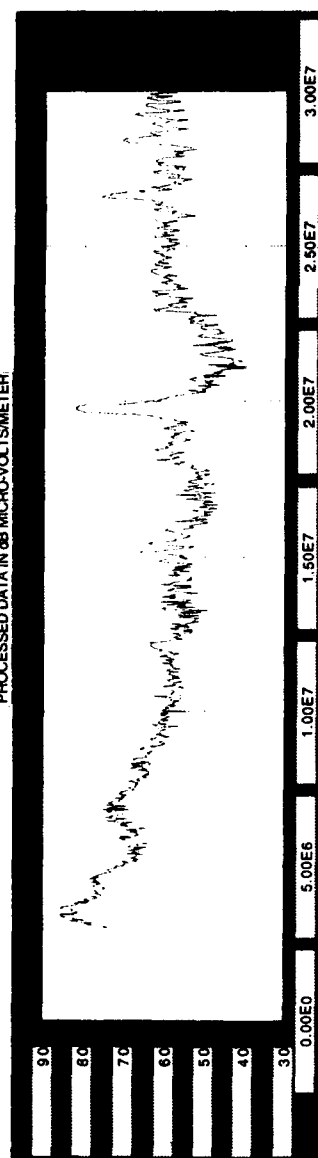
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M

0.00

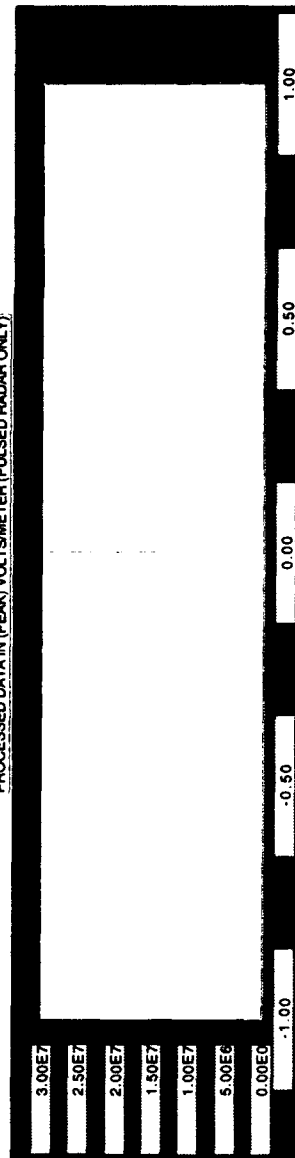
ORIGINAL RAW DATA IN dBm



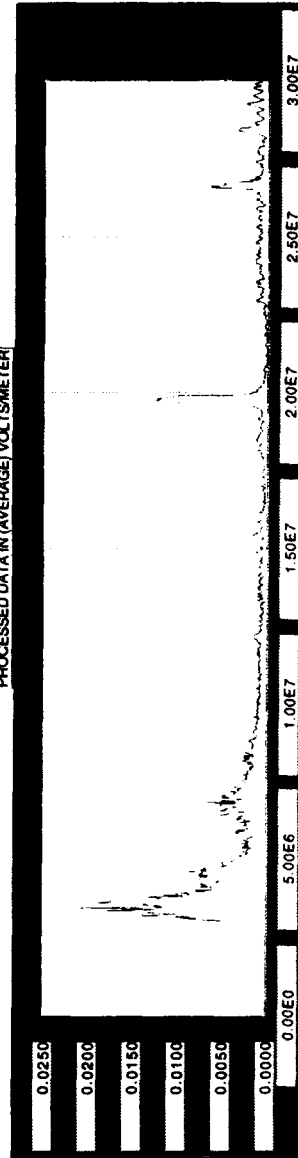
PROCESSED DATA IN dB MICRO-VOLTMETER



PROCESSED DATA IN (PEAK) VOLTMETER (PULSED RADAR ONLY)

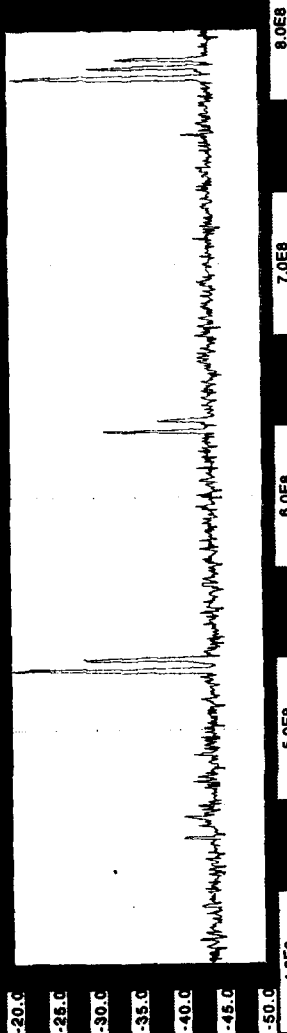


PROCESSED DATA IN (AVERAGE) VOLTMETER

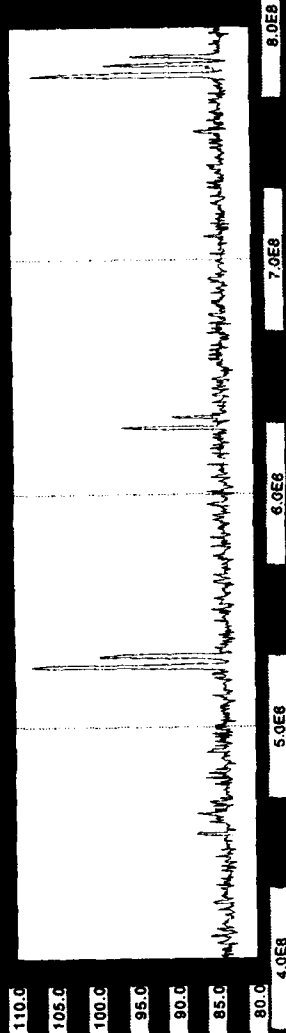


DUTY CYCLE 0	BP 0	DISK ERROR 0.00
RADAR NAME H-C	ANTENNA FACTOR (dB) 5	
RANGE (ft) 243	ALTITUDE (ft) 2434FFRONT	RADIUS (ft) 343.65
DATA FILE NAME MONTANA:FLYBYDATA:HCR2434243HFFRONT		
ESTIMATED E-FIELD LEVEL (PEAK) V/M 0.00		
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M 0.00		

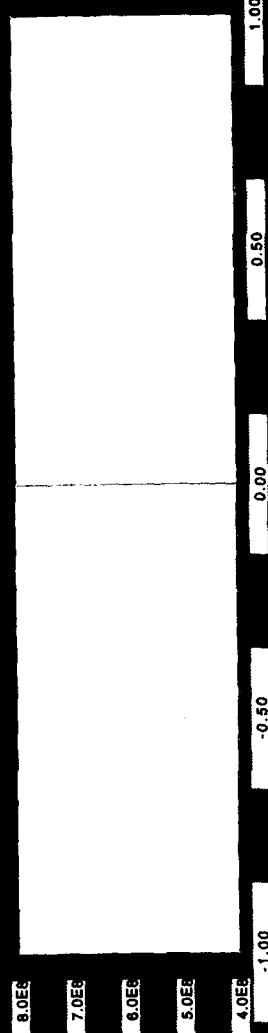
ORIGINAL RAW DATA IN dBm



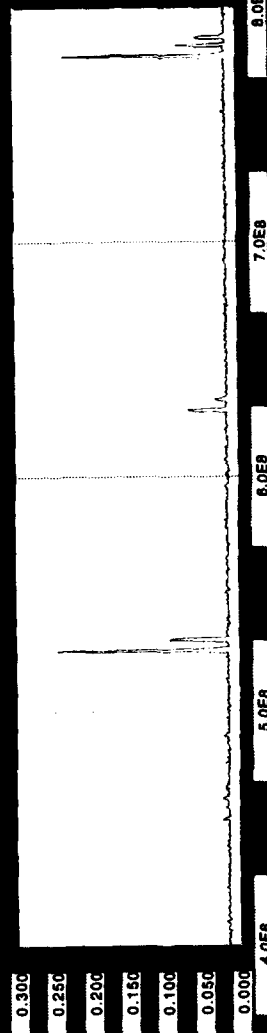
PROCESSED DATA IN dB MICRO-VOLTS/METER



PROCESSED DATA IN (PEAK) VOLTS/METER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLTS/METER



DISK ERROR
0.00

BP
0

DUTY CYCLE
0

ANTENNA FACTOR (dB)
20.8

RADAR NAME
HHC

RADIUS (N)
162.83

ALTITUDE (N)
115PPSIDE

RANGE (N)
115

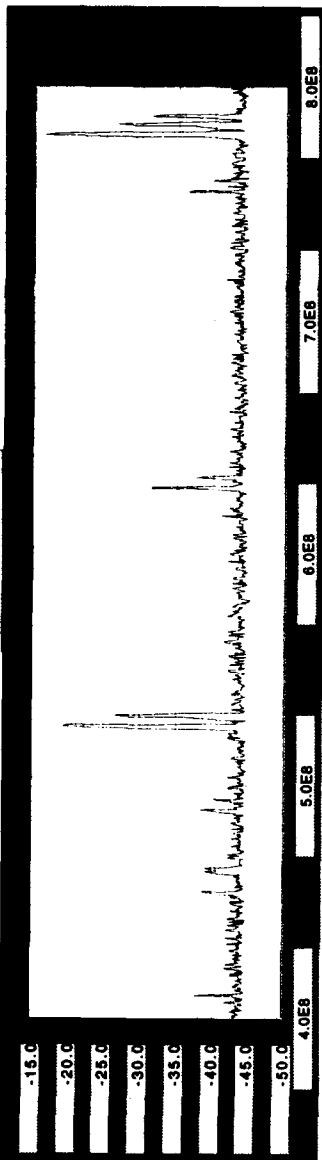
DATA FILE NAME

MONTANA\FLYBYDATA\HCR115A115PPSIDE

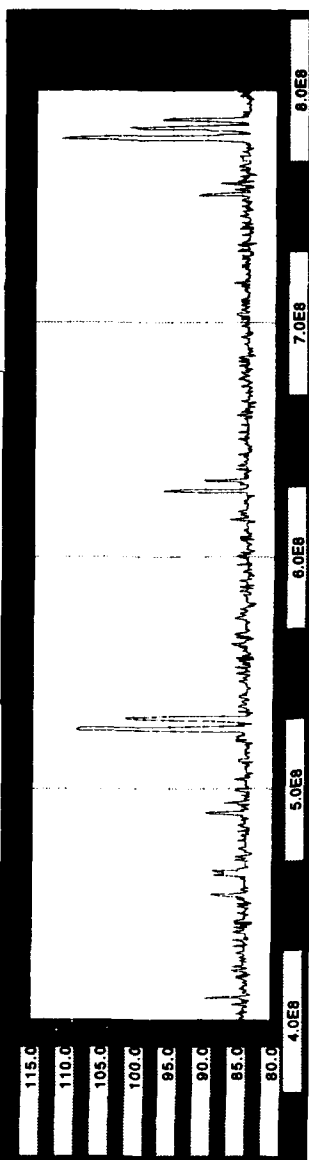
ESTIMATED E-FIELD LEVEL (PEAK) V/M
0.00

ESTIMATED E-FIELD LEVEL (AVERAGE) V/M
0.00

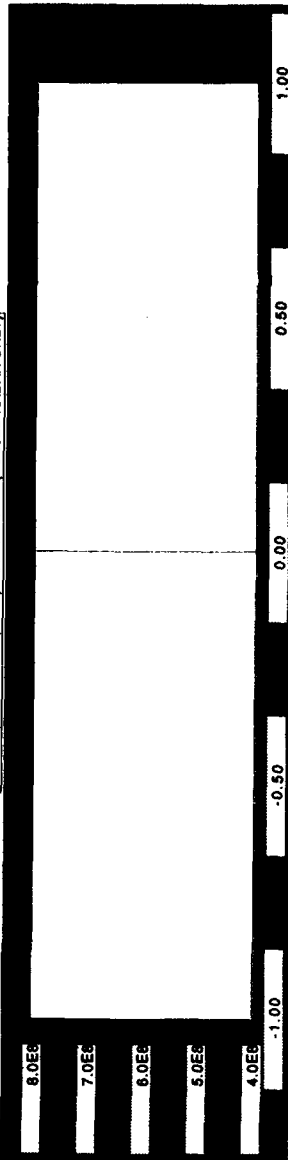
ORIGINAL RAW DATE IN (dBm)



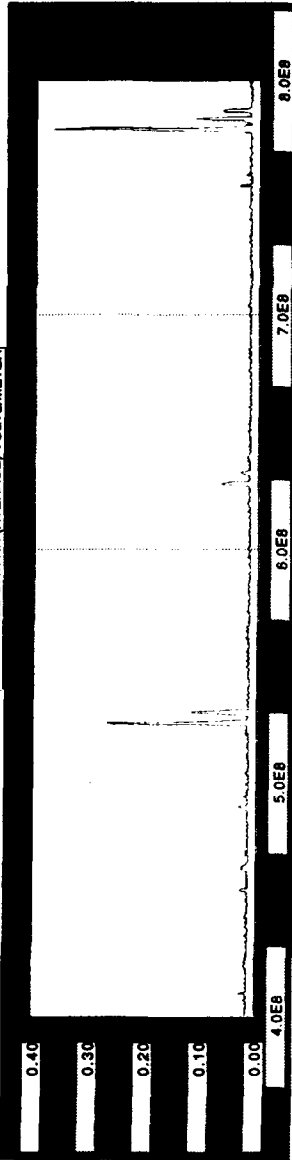
PROCESSED DATA IN (dB MICRO-VOLTMETER)



PROCESSED DATA IN (PEAK) VOLTMETER (PULSED RADAR ONLY)

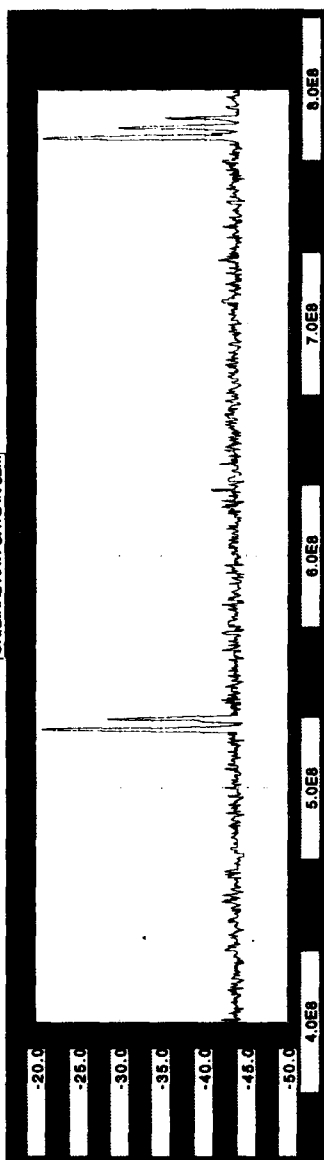


PROCESSED DATA IN (AVERAGE) VOLTMETER

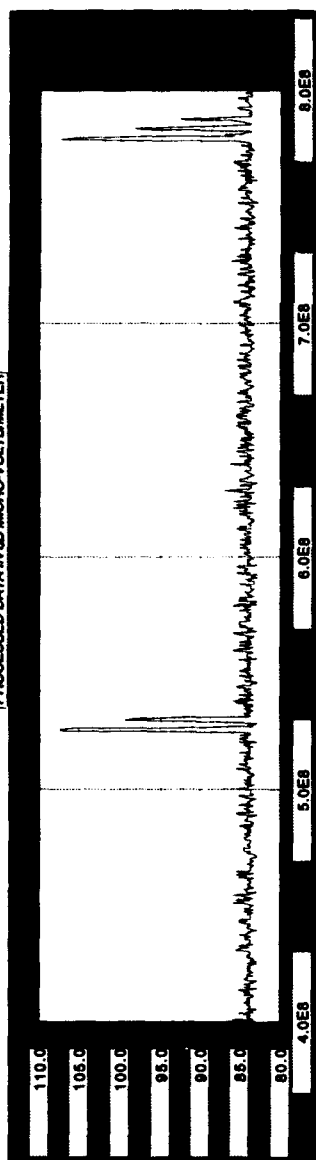


DUTY CYCLE	0	DISK ERROR	0.00
RADAR NAME	H-C	ANTENNA FACTOR (dB)	20.8
RANGE (N)	115	ALTITUDE (N)	115PPFRONT
		RADIUS (N)	162.63
DATA FILE NAME			
MONTANA:FLYBYDATA-HC-R115A115PPFRONT			
ESTIMATED E-FIELD LEVEL (PEAK) (V/M)			
0.00			
ESTIMATED E-FIELD LEVEL (AVERAGE) (V/M)			
0.00			

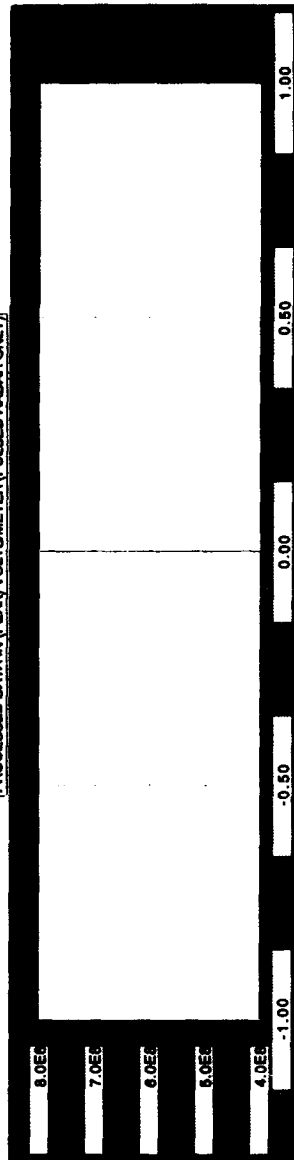
ORIGINAL RAW DATA IN dBm



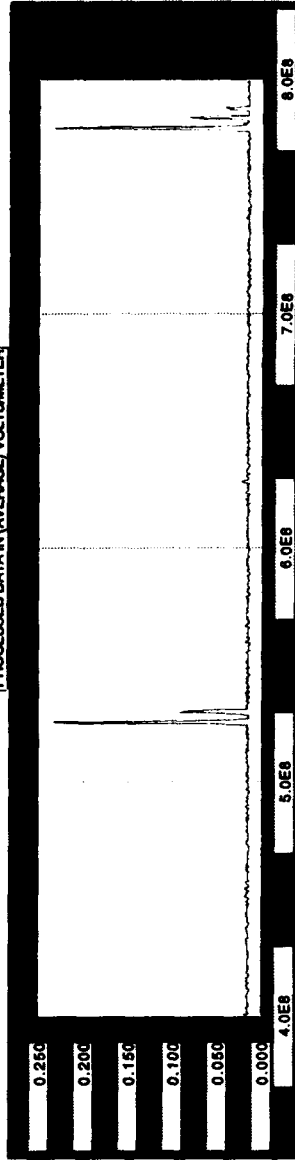
PROCESSED DATA IN dB MICRO-VOLTS/METER



PROCESSED DATA IN (PEAK) VOLTS/METER (PULSED RADAR ONLY)

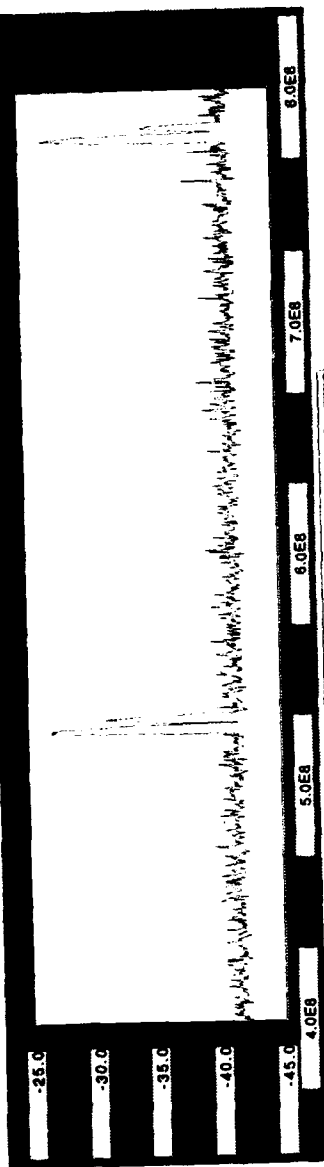


PROCESSED DATA IN (AVERAGE) VOLTS/METER

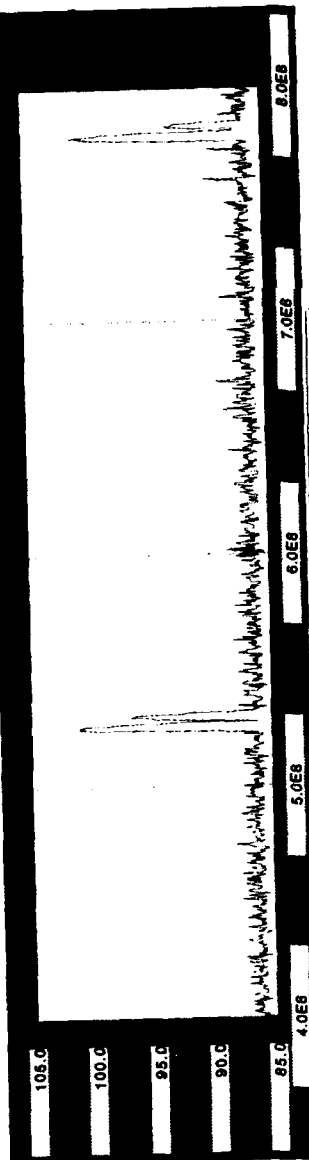


DUTY CYCLE	50	DISK ERROR	0.00
RADAR NAME	HC	ANTENNA FACTOR (dB)	20.8
RANGE (ft)	243	ALTITUDE (ft)	243PPSIDE
		RADIUS (ft)	343.65
DATA FILE NAME			
MONTANA:FLYBYDATA\HMC243A243PPSIDE			
ESTIMATED E-FIELD LEVEL (PEAK) V/M		0.00	
ESTIMATED E-FIELD LEVEL (AVERAGE) V/M		0.00	

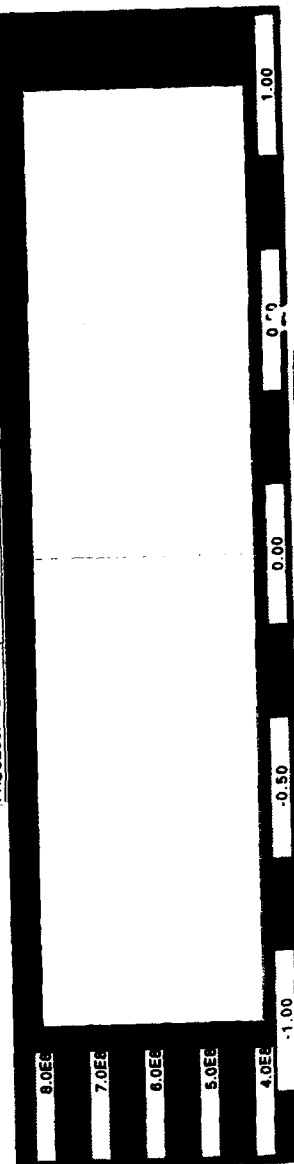
ORIGINAL RAW DATA IN dBm



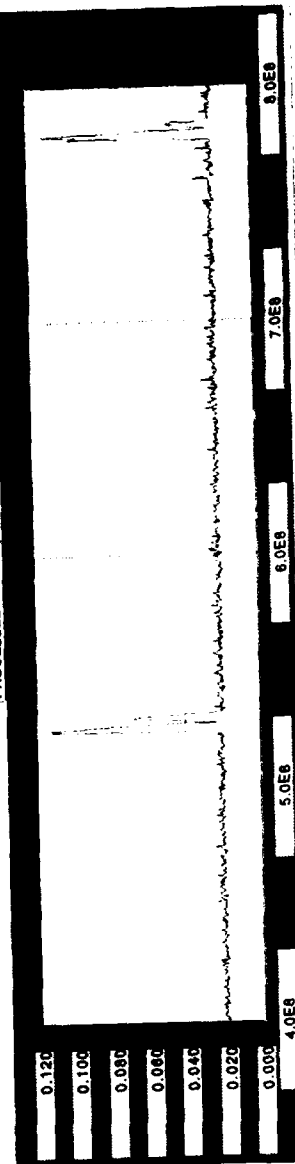
PROCESSED DATA IN dB MICRO-VOLTMETER



PROCESSED DATA IN (PEAK) VOLTMETER (PULSED RADAR ONLY)



PROCESSED DATA IN (AVERAGE) VOLTMETER



DUTY CYCLE 0	DISK ERROR 0.00
RADAR NAME HHC	ANTENNA FACTOR (dB) 20.8
RANGE (N) 243	ALTITUDE (N) 343.85
	RADIUS (N) 343.85
DATA FILE NAME MONTANA:FLYBYDATA:HCRC343438PPFRONT	
ESTIMATED E-FIELD LEVEL (PEAK) V(M) 0.00	
ESTIMATED E-FIELD LEVEL (AVERAGE) V(M) 0.00	